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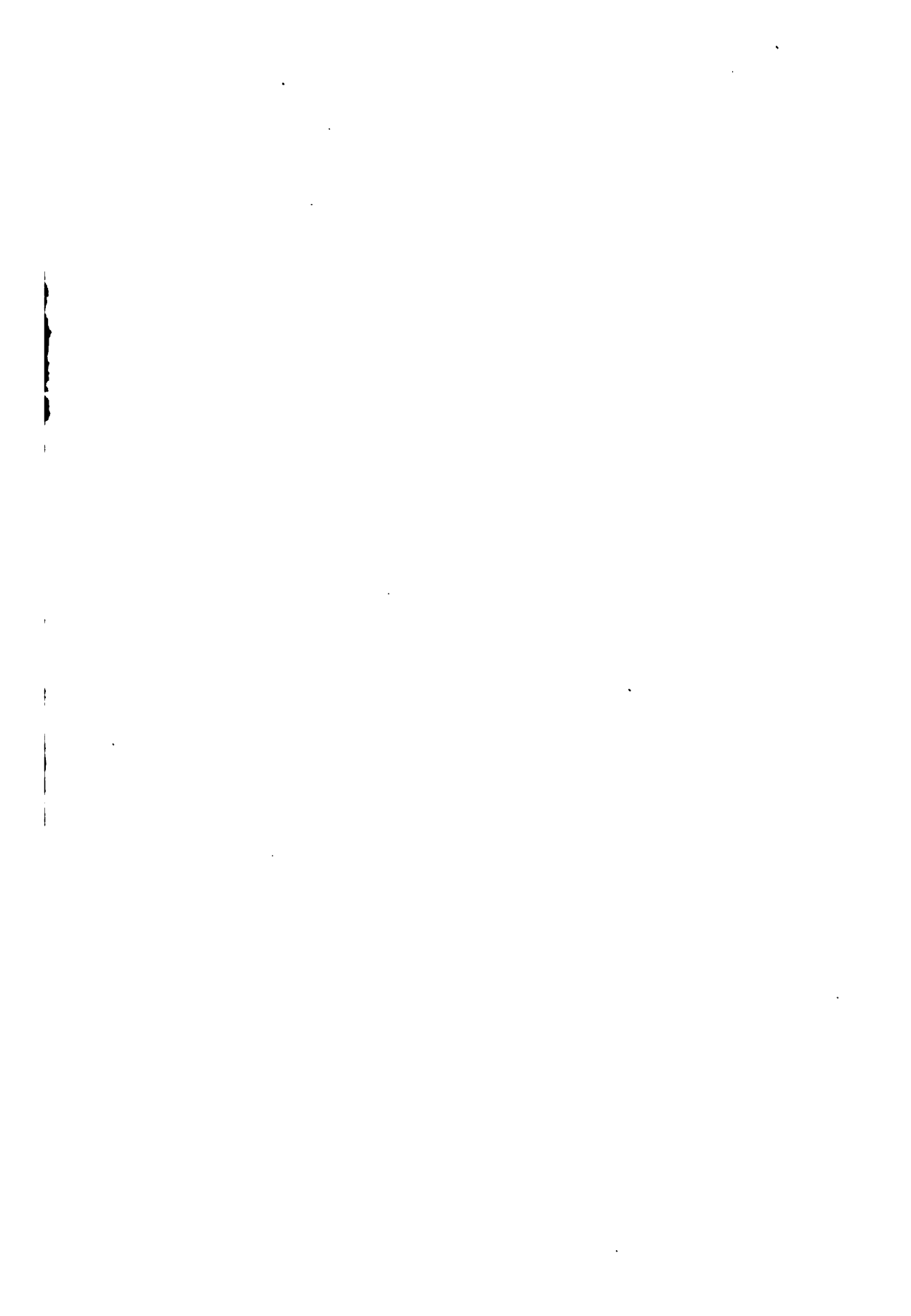
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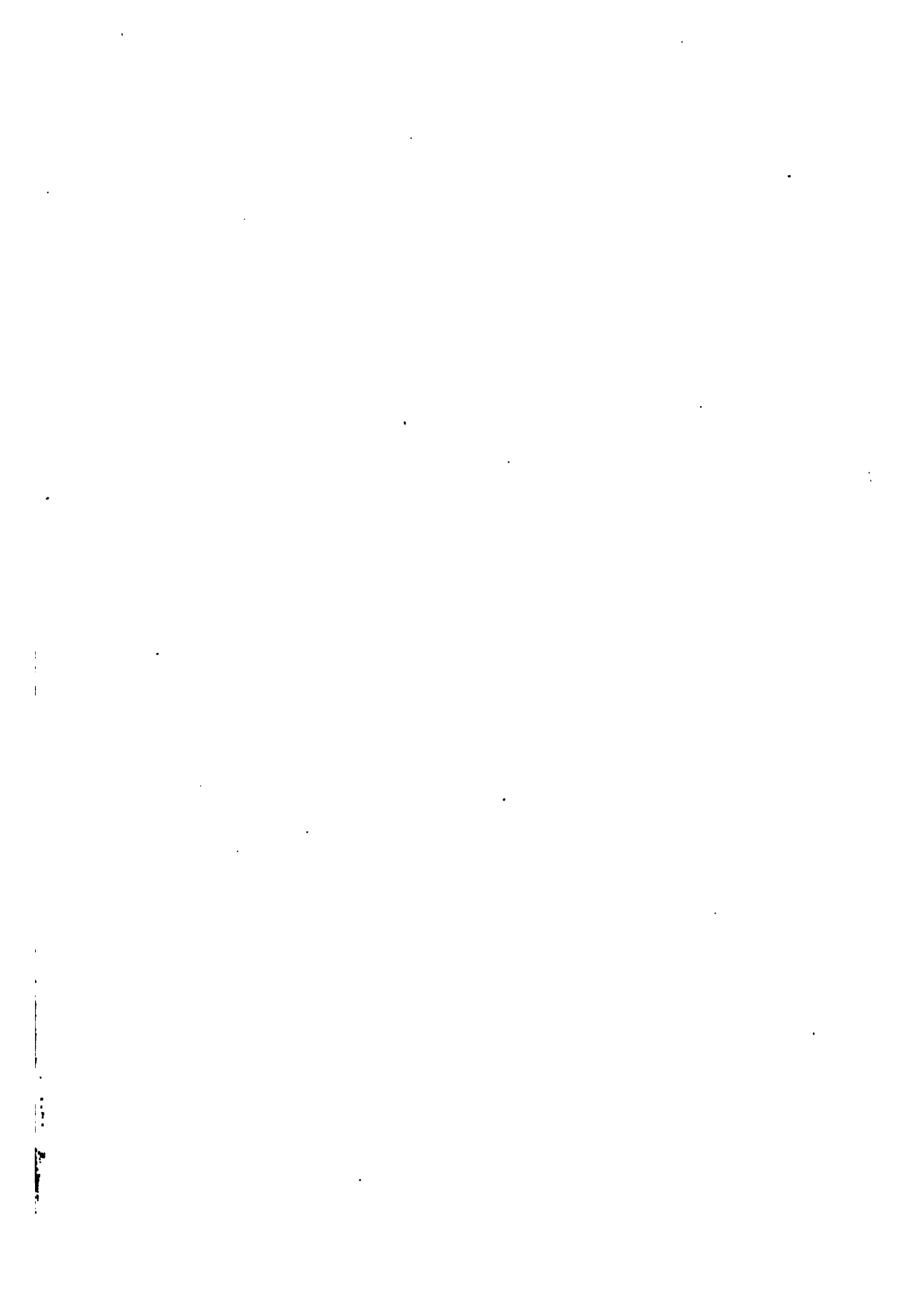
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Early Western Travels
1748-1846

Volume XV

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1748-1846

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Edited with Notes, Introductions, Index, etc., by

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Editor of "The Jesuit Relations and Allied Documents," "Original
Journals of the Lewis and Clark Expedition," "Hennepin's
New Discovery," etc.

Volume XV

Part II of James's Account of S. H. Long's Expedition
1819-1820



Cleveland, Ohio

The Arthur H. Clark Company
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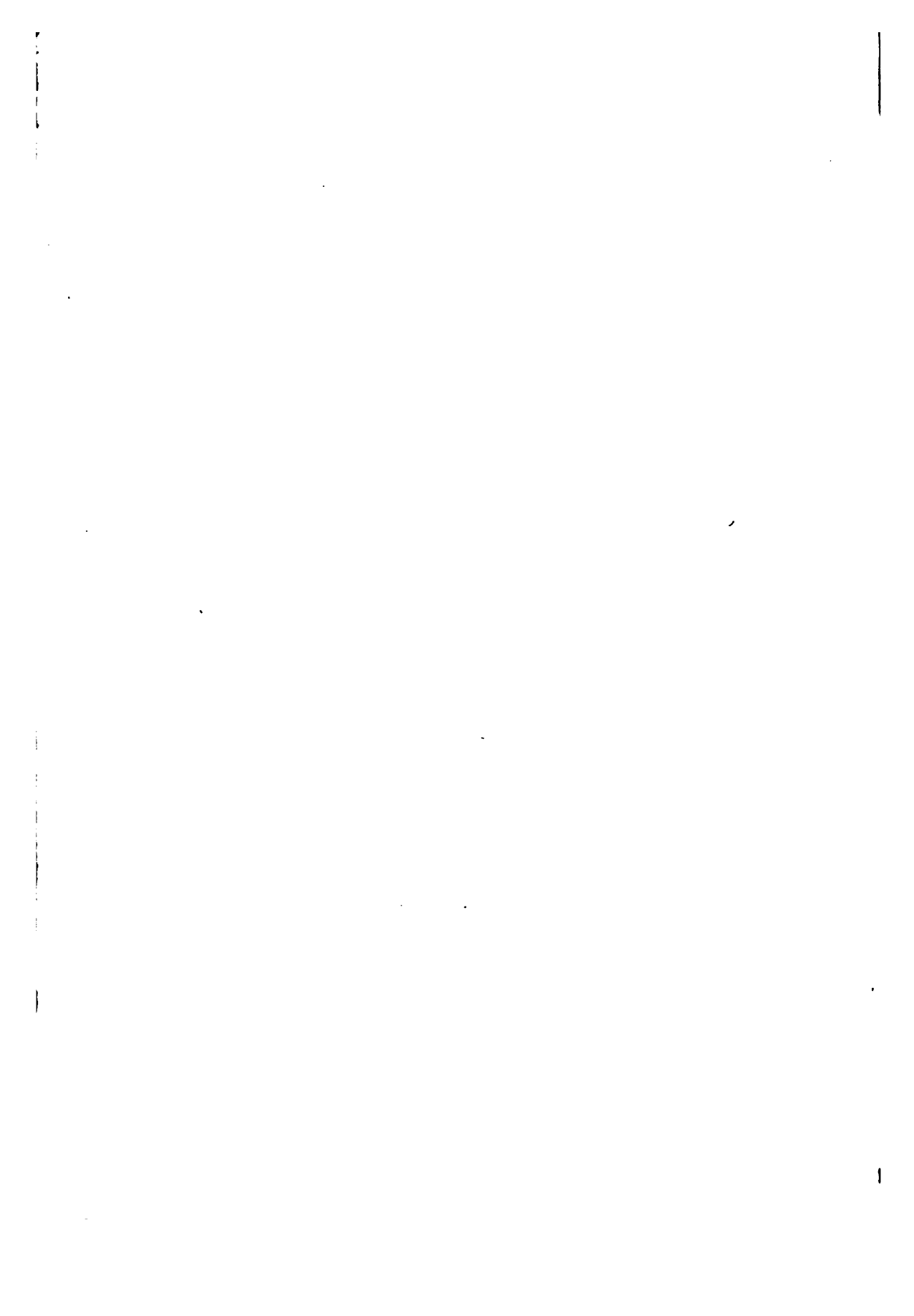
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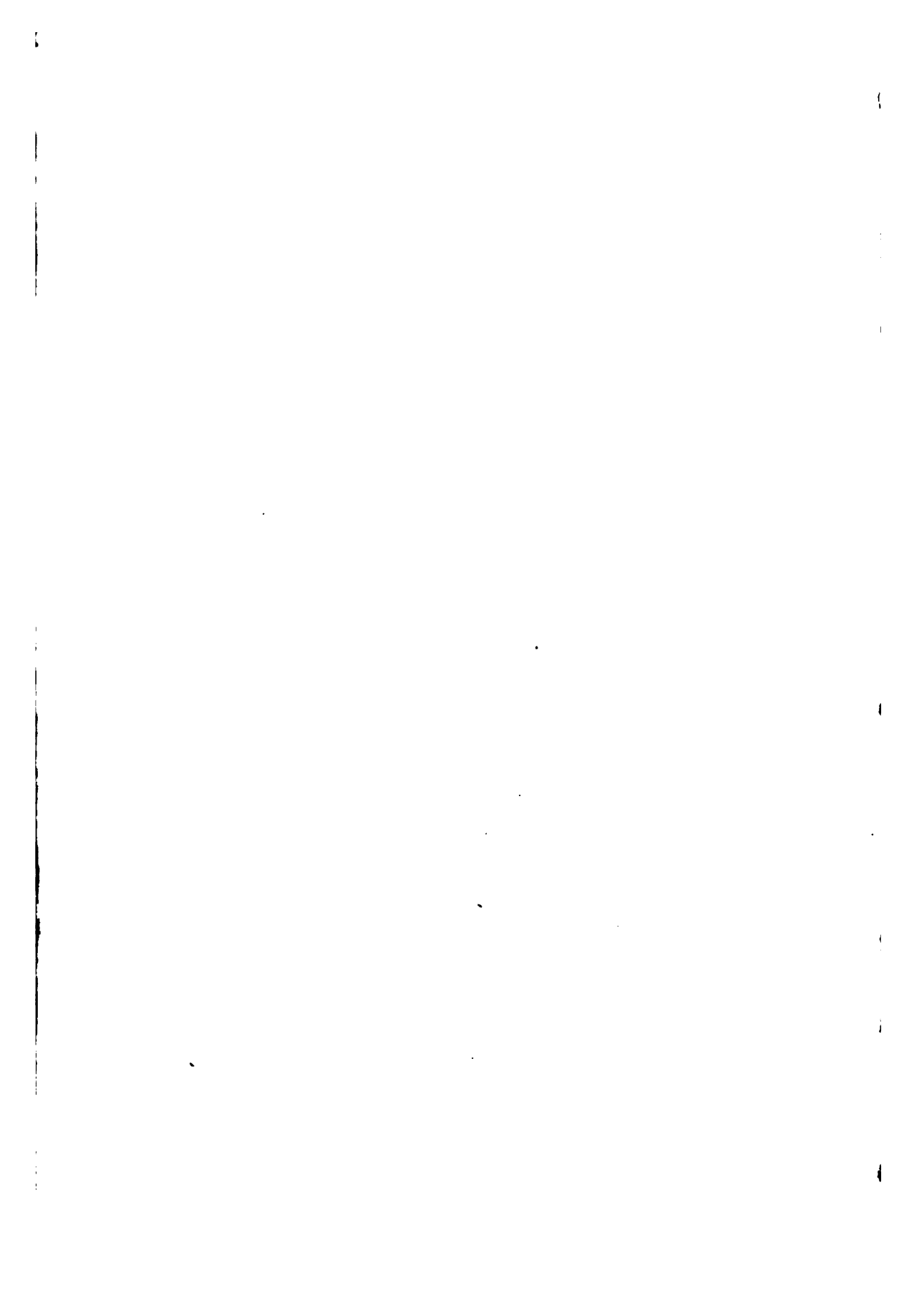


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**PART II OF JAMES'S ACCOUNT OF S. H. LONG'S
EXPEDITION, 1819 - 1820**

Reprinted from Volumes I and II of London edition, 1823



EXPEDITION FROM PITTSBURGH TO THE ROCKY MOUNTAINS

[PART II]

[209] CHAPTER I [XI]¹

Further Account of the Omawhaws — Of their Marriages — Of Infancy, and the Relationship of Parents and Children — Their Old Age.

IN the Omawhaw nation, numbers of the females are betrothed in marriage from their infancy; and as polygamy is extremely common, the individual who weds the eldest daughter, espouses all the sisters successively, and receives them into his house when they arrive at a proper age.

During her early youth, the daughter continues under the controul of her parents, with whom she resides, and donations are occasionally made to her by the lover, which are received by the parents, and appropriated to their own use, if the addresses of the individual are favourably received; but should an alliance with him, or with his family not to be desirable, his presents are rejected, and the application is not renewed.

Between the age of nine and twelve years, the young wife is occasionally an invited visitant at the lodge of her husband, in order that she may become familiarized with his company and his bed. But her permanent residence is still at the house of her parents, where she continues until the age of thirteen or fourteen, when the parents give

¹ Chapter xi of volume i of the original London edition.— ED.

notice to their son-in-law, that their daughter is of sufficient age to partake of his bed. The husband then receives his bride without any formality, and leaving his other wives at home, departs with her upon a journey of a few days, during which time the marriage is consummated. On their return, the young wife again dwells in the lodge of her parents, occasionally [210] visited by her husband, until a general hunt calls the nation from the village.

During this hunt the husband again takes possession of his bride, whose parents constantly pitch their lodge near that of the son-in-law.

The husband, previously to introducing his new wife to his lodge, endeavours to obtain the consent of his other wives; for this purpose he speaks kindly to them, states the necessity of providing them with a helpmate to alleviate their burthens, and thus succeeds in his wishes.

The new matrimonial alliance is at first productive of no discord in the family; but at length the decided partiality, displayed by the husband in favour of his recent acquisition, engenders much jealousy in the minds of his elder wives. Quarrels often succeed, which are sometimes terminated by the natural weapons of the wives, who, after the liberal use of their voluble tongues, apply for more strenuous aid to the agency of their teeth and nails, or to the somewhat more formidable array of tomahawks, clubs, and missiles.

During combats of this nature, the husband remains perfectly neutral, sitting with his robe drawn over his head. Should the wives succeed in expelling the recent intruder, who takes refuge in the house of her parents, the husband endeavours to soothe their anger, and to point out to them the impropriety of their conduct.

A lecture of this description, to women elated with vic-

tory, is not always received in the same conciliatory disposition with that which dictated the advice; but sometimes results in another quarrel, which is terminated by the administration of a few blows on the persons of his refractory squaws. These will then depart from his lodge, declaring their determination to live with him no longer; a resolution which, however, fails with their anger, and they seek a reconciliation. Their friends apply to the husband in [211] their favour, and are informed that he was angry when he flogged them, and that he is now sorry for it. Thus matters are with but little difficulty adjusted; the wives return home, and are harangued by the husband, after which they proceed harmoniously together in their domestic employments, until some new feud arises to disturb the repose of the family.

On the general hunting expeditions, in which the nation separates into distinct bands, the husband takes with him his favourite wife, whilst the others accompany the bands in which are their parents. Sometimes, during a temporary encampment, the husband leaves his favourite for a few days, on pretence of business, in order to visit one of his wives in another band. On his return, he perceives the brow of his favourite to lower with evident displeasure; if his dog approaches her, she knocks him over with a club, and her child is repulsed with violence from her side; she kicks the fire about, pulls about the bed, and exhibits other signs of anger. The husband affects not to notice her inquietude, but suffers her to proceed in her own way, until the violence of her anger appears to be in some measure dissipated; he will then, perhaps, venture to request her to repair his mockasins for the morrow's hunt. "Take them to your dear wife in the other band," will most probably be the reply to his solicitation.

Such is sometimes the violence of the displeasure of his squaw, that he is obliged, through prudential motives, to take refuge in a neighbouring lodge, where he solaces himself with the pipe, until he supposes there is no longer danger of being provoked beyond endurance, so as to be tempted to chastise her; a discipline which she seems rather to solicit than avoid, that she may have a sufficient excuse for wreaking her vengeance on her rival, and for giving free vent to her sentiments and opinions upon her husband, in language of the most superlatively indecent and opprobrious nature.

[212] When he retires to repose, he invites her to his bed, but receives a positive refusal: she rolls herself in her covering alone; but generally, during the night, she becomes pacific, and a negociation ensues, which restores harmony between them.

The far greater portion of their matrimonial quarrels arise from jealousy, though many affect to treat this passion with ridicule, or with indifference.

"Were you ever jealous?" said Sans Oreille,² an Oto chief, to Mr. Dougherty; "I was once fool enough to be jealous, but the passion did not long torment me; I recollected that women are often alone, their husband being necessarily often absent a hunting, and even when the husband is at home, the squaw is under the necessity of going to a distance for the purpose of bringing water, or collecting wood, when frequent opportunities occur of being unobserved in the company of other men; and I am not so silly as to believe that a woman would reject a timely offer. Even this squaw of mine, who sits by my

² French for "careless." An Osage chief of this name who had been to Washington, returned to his tribe in Pike's company in 1806. See Coues, *Expeditions of Zebulon M. Pike*, index.—ED.

side, would, I have no doubt, kindly accede to the opportune solicitations of a young, handsome, and brave suitor." His squaw laughed heartily, but did not affect to repel the imputation.

Many husbands will take no cognizance whatever of the breach of conjugal fidelity on the part of the wife; and the offer of one of their wives for company during the night, though it might call upon our politeness for a return of thanks, was no cause of surprise to us during our stay at their villages.³

A husband of a different temperament of mind, on detecting his wife in an adulterous act, will rarely endeavour to maim her paramour, or otherwise seriously injure him by killing his horses or dogs; but [213] his attention will be chiefly or exclusively directed to his wife, whom he punishes by cutting off her hair, rarely her ears or nose; sometimes he resorts to a different punishment, and scarifies her face and head with his knife, after which she is repudiated, and becomes a common prostitute.

An inexorable man, thus circumstanced, has been known to abandon his frail partner, after subjecting her to a punishment very similar to that inflicted on the incontinent Roman matron, under the authority of the Emperors.⁴

Mr. Dougherty, being in Ong-pa-ton-ga's lodge, heard

³ This national trait of extreme hospitality, with respect to the disposal of the wife, is common to many nations in the various parts of the world; as amongst the African negroes, and the Laplanders; and, agreeably to the records of history, amongst the Romans, Spartans, and others.—JAMES.

⁴ The allusion is indefinite. In the reign of Augustus a law was enacted under which conviction for this offense was liable to be followed by confiscation and banishment; as habitual prostitution was not so punished, Roman matrons often chose public shame to avoid the penalties of the law. A law of Justinian made the adultery of a wife punishable by whipping and confinement in a convent during life, unless the husband remitted the confinement within two years. See Dorsey, "Omaha Sociology," in *Bureau of Ethnology Report*, 1881-82, p. 364.—ED.

the loud voice of supplication from an unhappy father, whose daughter had been recently taken in adultery by her husband. "O, great Ong-pa-ton-ga!" said he, "whose nose is like that of a mule, and who art greater than the Wahconda himself, condescend to intercede for my daughter with her cruel husband; do not permit her face to be disfigured, her nose to be cut off, or the disgrace of the punishment of the prairie to be inflicted upon her."

A *brave*, who detected his wife in the commission of adultery, offered her no indignity, but immediately transferred her to the object of her preference, and accompanied the gift with a horse, and sundry articles of merchandize.

Even a very remote degree of consanguinity is an insuperable barrier to the marriage union. This state on the part of the man, seems to be the result of love for the woman; on that of the squaw, of convenience, or acquiescence in the will of her parents. On some occasions, however, an Indian marries through ambitious motives; he is, for instance, aspiring to the acquisition of a particular dignity; he will then endeavour to quiet the opposition of some powerful individual, by intermarrying in his family.

Their connubial attachments are often very strong. [214] An Omawhaw and his squaw, on a solitary hunting expedition, were discovered at a distance from their temporary lodge, by a Sioux war-party. They endeavoured to escape from the enemy, but the squaw was soon overtaken, struck to the ground, and subjected to the terrible operation of scalping. The husband, although at this time beyond the reach of the balls and arrows of the Sioux, seeing his squaw in their hands, immediately turned upon them,

and drawing his knife, the only weapon he had, furiously rushed amongst them, in order to revenge the death of his squaw, even with the inevitable sacrifice of his own life; but he was almost immediately despatched, without having accomplished his heroic purpose.

In the young squaw, the catamenia, and consequent capability for child-bearing, we were informed, takes place about the twelfth or thirteenth year, and the capacity to bear children seems to cease about the fortieth year; but as superstitious notions prevent these Indians from taking any note of their ages, these periods are stated with some hesitation.

When the married squaw perceives that the catamenia does not recur at the expected period, she attaches a small leathern string to her girdle, and ties a knot in it, to note the incipient state of pregnancy, and another knot is added at termination of each successive moon, as a register of its progress.

When the squaw perceives the approach of this depurating process, she retires from her family, and erects a little shelter of bark or grass, supported by sticks, properly arranged, where she makes a fire, and cooks her victuals alone. She is thus compelled by custom to absent herself until the expiration of four days, when she returns to her lodge. During this time she must not approach or touch a horse, as the [215] Indians believe that such contamination would impoverish that animal. They sometimes retire, and build their little shelter under a false pretext, when the real object is to favour the approach of some esteemed lover, to whom the vigilance of the husband has denied any other means of obtaining a stolen interview.

The squaw has no need of propitiating the goddess

Manageneta,⁸ but during pregnancy continues her usual avocations, and even in its most advanced stage, she neither bears a lighter burden on her back, nor walks a shorter distance in a day, than she otherwise would; neither does she expose herself the less on that account to the inclemencies of the weather.

If, on a march, a pregnant woman feels the pains of parturition, she retires to the bushes, throws the burden from her back, and, without any aid, brings her infant into the world. After washing in water, if at hand, or in melted snow, both herself and the infant, she immediately replaces the burden upon her back, weighing, perhaps, between sixty and an hundred pounds, secures her child upon the top of it, protected from the cold by an envelop of bison robe, and then hurries on to overtake her companions.

It is only at the delivery of the first child that any difficulty is ever anticipated; and, on this occasion, as there are no professed midwives, the young wife calls in some friendly matron to assist in case of need. The aid which these temporary midwives afford, seems to be limited to the practice of tying a belt firmly about the waist of the patient, and shaking her, generally in a vertical direction, with considerable violence. In order to facilitate the birth, a vegetable decoction is sometimes administered; and the rattle of the rattle-snake is also given with, it is said, considerable effect. The singular appendages of this animal are bruised by pounding, or comminuted by [216] friction between the hands, mixed with warm water; and about the quantity of two segments constitutes a dose.

The art of *turning* does not appear to be known, neither

⁸ Mana Genita, or Genita Mana, in ancient Italian mythology the goddess who presided at the birth and death of human beings.— Ed.

is blood-letting practised in their obstetrics. We heard of no case of retention of the placenta after parturition, nor of the affection of longing, or of nausea of the stomach during pregnancy.

On the delivery of her first child, the young mother, who appears to be but little enfeebled by the process, arises almost immediately, and attends to the ordinary house-work; but she does not, in general, undergo any laborious occupation, such as cutting and carrying wood, until the lapse of two or three days. The second child is brought forth without difficulty, and the parent, after bathing, ties it to a board, after their usual manner, then proceeds with her daily work, as if nothing extraordinary had occurred.

Mammary abscess is very rare; a squaw of the Sioux nation died with this complaint.

Sterility, although it does occur, is not frequent, and seems to be mostly attributable to the husband, as is evinced by subsequent marriages of the squaws.

The usual number of children may be stated at from four to six in a family, but in some families are ten or twelve. Of these the mother has often two at the breast simultaneously, of which one may be three years of age. At this age, however, and sometimes rather earlier, the child is weaned by the aid of ridicule, in which the parents are assisted by visitors.

The catalogue of the diseases, of both children and adults, probably bears a similar proportion to that of the white people, and is far less extensive and appalling. The summer complaint, so destructive to children in our region, appears to be uncommon with the Omawhaw infants; but, during their first year, they suffer more from constipation of the bowels [217] than from any other complaint, but which is occasionally remedied by passing a

small piece of soap (which is obtained from the traders,) cut into the proper shape, into the rectum.

Dentition seems to be productive of no great distress; the gums are never cut, but the teeth are permitted to force their way through. The shedding of the teeth is also accomplished without much difficulty; the milk-teeth, being forced out by the permanent ones, either fall from the mouth, or are gently extracted by the fingers of the parent.

Monstrous births sometimes occur, though rarely; and it is not known that infants are ever destroyed by their parents in consequence of deformity, unless the degree of malformation is excessive. The Indians mention two monsters which were born in their village; one of these they represent as resembling a white bear, and the other a cray-fish; they were both destroyed. The husband of the squaw, who gave birth to the former, said that she must have had connection with a white bear; but she asserted that the production of the monster was occasioned by a fright, which she received at seeing her husband suddenly, whilst he was personating that animal both in dress and gesture.

The magi affect to converse with the foetus in utero, when the mother perceives it to be uneasy; they also sometimes venture to predict its sex.

Abortion is effected, agreeably to the assertions of the squaws, by blows with the clenched hand, applied upon the abdomen, or by repeated and violent pressure upon that part, or by rolling on the stump of a tree, or other hard body. The pregnant squaw is induced thus to procure abortion, in consequence of the jealousy of her husband, or in order to conceal her illicit amours, to which all the married squaws, with but few exceptions, are addicted.

The infant, when recently born, is of a reddish-brown colour; but in a short time it becomes whitish, [218] though never so pure a white as that of the children of white people. The change to the national complexion is then gradual, and independent of exposure; inasmuch as those parts of their bodies, which are perpetually concealed from the light, change simultaneously with the face.

The abdomen of the children protrudes very considerably; and the sole article of dress, which the younger boys wear during the warm season, is a small belt of cloth around the middle of the abdomen, leaving every other part of the body perfectly naked. In wintry weather they have the addition of leggings, mockasins, and a small robe.

The female children are furnished with a short piece of cloth, in imitation of a petticoat, but destitute of a seam, belted round the loins, and depending as low as the knees. Their hair, when dressed, is parted longitudinally on the top of the head, and collected on each side behind the ear, into a vertical cylindric form, of the length of five or six inches, decorated with silver and brass rings and ribands; the line of separation of the hair is coloured with vermilion.

This disposition of the hair into two rolls is generally observed in the girls, and is often continued one or two years after their residence with a husband.

The girl is kept in a state of considerable subjection; she habitually conforms to all the commands of the mother, and is obliged to assist her in her ordinary occupations; if she is refractory, she receives a blow upon the head or back from the hand of the mother, but hardly ever from the father. At the age of four or five years, she is taught the use of the *hoppas*, and is gradually familiarised to carry burdens. They are trained up to industry,

and are taught to cut wood, to cultivate maize, to perform the scalp dance, and are early informed of the sexual relations of men and women, and warned against the arts which will be aimed at the subjugation of their virtue.

[219] The experienced parent, however, in addition to these salutary counsels, keeps a vigilant eye to the deportment of her unmarried daughter, and so sedulously guards her steps, that the arts of seduction, notwithstanding the free use of the licentiousness of language, appear to be more rarely triumphant over the Omawhaw maid, than over the civilized fair.

Hence a prostitute, who has never been married, is of exceedingly rare occurrence. Yet, notwithstanding the vigilance of the parent, the daughter sometimes elopes with a favoured lover, but not until she has ascertained that his intentions are perfectly honourable.

The girl displays the most affectionate regard for her parents, and grand parents.

Whilst the deportment of the sister is thus trenched and guarded, the brother roams at large, almost uncontrolled. Should his conduct be at any time flagrantly outrageous, he will, perhaps, in the anger of his parents, receive a harsh reproof; but an ill-judged affection soon prompts them to assuage his grief, and dry his tears, by presents and soothing expressions. At a very early age he is furnished with a bow and arrows, with the use of which he delights to employ himself, that he may be qualified for a hunter and warrior.

From the age of about five years to that of ten or twelve, custom obliges the boy to ascend to a hill-top, or other elevated position, fasting, that he may cry aloud to the Wahconda. At the proper season, his mother reminds him that "the ice is breaking up in the river, the ducks

and geese are migrating, and it is time for you to prepare to go in clay." He then rubs his person over with a whitish clay, and is sent off to the hill-top at sunrise, previously instructed by his mother what to say, and how to demean himself in the presence of the Master of life. From this elevation he cries out to the great Wahconda, humming a melancholy tune, and calling on him to have pity on him, and make him a great hunter, [220] horse-stealer, and warrior. This is repeated once or twice a week, during the months of March and April.

It is only when his pride is concerned, that the boy is obedient to the injunctions of his parents; on other occasions he disregards them, or replies only with ridicule. A boy in anger discharged an arrow at his mother, which penetrated her thigh; when, instead of chastising him for the act, she applauded his spirit, declaring him to be a gallant fellow, the early promise of a great warrior. But though he does not scruple thus to insult his parents, he would unhesitatingly revenge an indignity offered them by another.

He soon becomes ambitious of martial distinction, in consequence of frequently hearing the old warriors narrate their feats of arms, and eagerly anticipates the age which will justify his enrolling himself in the ranks of a war-party.

At the age of twelve or thirteen, having received every instruction respecting their mode of warfare, his wishes are gratified, and he is accepted as a volunteer in the path of honour.

As an instance of high chivalric ideas sometimes instilled into the mind of the Indian, which in some cases almost supersede the feelings of nature, and which are eminently calculated to excite a degree of enthusiasm in

the youthful warrior, the following anecdote may be narrated.

The Osage nation a few years since marched to attack the Konza village. They encamped unobserved at a moderate distance from the village, and despatched two of their warriors with pipes to the Konzas to invite all their chiefs to a pretended peace conference, and to inform them that presents of horses and merchandize would be made to them, to compensate for two individuals of their nation whom the Osages had killed.

The Konzas, suspecting the treachery intended, [221] at first proposed to put the messengers to death, but on further consideration, supposing them sincere, the chiefs determined to accompany them. On the following morning, however, when they were about to set out for the Osage camp, a chief arose and harangued them, stating that he had had a dream in the night, from the interpretation of which, he was confident that the Wahconda was averse to their proposed visit.

This information deterred all from going, with the exception of two, who mounted their horses and followed the messenger, saying, that whatever might be the event, the Osages should not be led to believe that every individual of the nation was afraid to rely upon their faith.

They were, however, soon undeceived. The enemy, who had placed themselves in ambuscade on each side of the path at a suitable position, fired on the Konzas, one of whom was killed, and the other escaped to his people.

The Osages, who had hoped by this ruse de guerre to slaughter all the chiefs without any loss to themselves, finding their scheme abortive, rushed on to attack the village.

They were met by about one half their number of Kon-

zas, who, after an obstinate encounter, repulsed them with considerable loss.

After the action, some one informed Son-ja-nin-ga that his son was among the slain. "Did he die with his face to the enemy?" said the father. "He did so," replied the other. "Then he perished nobly," rejoined Son-ja-nin-ga, exultingly, and "I will not lament his fall." This resolution, however, was so much at variance with his sensibility, that it could not long be maintained. He mounted on the top of his lodge, and harangued his people on the subject of the martial deeds of his son, who had already become a distinguished warrior; but when he spoke of his [222] final scene, he was so absolutely overpowered by grief, that he precipitated himself from his elevated situation to the earth; receiving, however, but little injury, he immediately assumed the state of mourning with its utmost rigours.

At the age of fourteen or fifteen, it is not uncommon for the young Omawhaw to elope with a married woman, and fly for protection to the Puncaws.

The home of the young man, until he marries, is his father's house; but after he thus changes his condition, he repairs to the house of his father-in-law, until the birth of the first child, when he returns with his little family to his father's dwelling, where he continues to reside. On national hunts he provides a separate skin lodge for his family.

When more advanced in age, and of some little consequence or influence amongst the people, he unites with two or three families in the building of a permanent dirt lodge in the village, similar to those already described of the Konzas.

The labour of erecting this edifice devolves almost ex-

clusively upon the squaws. The interior is readily furnished; the indispensable requisites being only a kettle, a wooden bowl, and a couple of horn spoons, a few skins for a bed and covering, a pillow made of leather stuffed with hair, and a bison's stomach, instead of a bucket, for carrying water.

On the death of the husband, the squaws exhibit the sincerity of their grief by giving away to their neighbours every thing they possess, excepting only a bare sufficiency of clothing to cover their persons with decency. They go out from the village, and build for themselves a small shelter of grass or bark; they mortify themselves by cutting off their hair, scarifying their skin, and, in their insulated hut, they lament incessantly. If the deceased has left a brother, he takes the widow to his lodge after a proper interval, and considers her as his wife, without any [223] preparatory formality.* If the deceased has not left a brother, the relations of his squaw take her to their lodges. This lamentation and mortification, which the squaws impose upon themselves, continue for a period of six or eight months, or even a year.

Many circumstances tend to show that the squaw is susceptible of the most tender and permanent attachment to an individual of the opposite sex, and that on the cessation of all hope of a union with the beloved object, the con-

* This custom is the same with that of the ancient Jews under the law of Moses, for which we have the authority of St. Luke. "Moses wrote unto us, if any man's brother die, having a wife, and he die without children, that his brother shall take his wife, and raise up seed unto his brother." And Elphinstone, in his account of Caubul, informs us, that among the Afghauns, as among the Jews, it is thought incumbent on the brother of the deceased to marry his widow.—JAMES.

Comment by Ed. The number of Indian customs bearing a similarity to those of the Hebrews led to the now discarded theory that the former are descendants of the "lost ten tribes" of Israel.

sequences have sometimes been fatal. Several instances came to our knowledge, of a young female committing the act of suicide after marriage with a person, in obedience to the will of her parents, whilst her affections were devoted to another.

The maternal fondness appears also to be not less exquisite than we perceive it to be with civilized mothers. The following anecdote may be cited in support of this observation.

In the year 1814, a trader married a beautiful squaw of one of the most distinguished families in the Omawhaw nation. This match, on the part of the husband, was induced by the following circumstances. Being an active, intelligent, and enterprising man, he had introduced the American trade to the Missouri Indians, and had gained great influence amongst them by his bravery and ingenuous deportment. But he at length perceived that his influence was gradually declining in consequence of the presence and wiles of many rival traders, to whom his enterprise had opened the way, and that his customers were gradually forsaking him.

[224] Thus circumstanced, in order to regain the ground he had lost, he determined to seek a matrimonial alliance with one of the most powerful families of the Omawhaws. In pursuance of this resolution, he selected a squaw whose family and friends were such as he desired. He addressed himself to her parents agreeably to the Indian custom, and informed them that he loved their daughter, that he was sorry to see her in the state of poverty common to her nation, and although he possessed a wife among the white people, yet he wished to have one also of the Omawhaw nation. If they would transfer their daughter to him in marriage, he would obligate himself to treat her kindly;

and as he had commenced a permanent trading establishment in their country, he would dwell during a portion of the year with her, and the remainder with the white people, as the nature of his occupation required. His establishment should be her home, and that of her people during his life, as he never intended to abandon the trade. In return, he expressed his expectation, that, for this act, the nation would give him the refusal of their peltries, in order that he might be enabled to comply with his engagement to them. He further promised, that if the match proved fruitful, the children should be made known to the white people, and would probably be qualified to continue the trade after his death.

The parents replied with thanks for his liberal offers, and for his disposition to have pity on them; they would not object to the connection, and hoped that their daughter would accept of him as her husband.

The parents then retired, and opened the subject to the daughter. They assured her that her proposed husband was a great man, greater than any of the Omawhaws; that he would do much for her and for them, and concluded by requesting her to acquiesce in the wishes of the white man. She replied, that all [225] they said was, without doubt, true, and that agreeably to his request, she was willing to become his wife.

The agreement being thus concluded, the trader made presents, agreeably to the custom of the nation, and conducted his interesting prize to his house.

The succeeding spring the trader departed for the settlements, leaving her of course at his trading house.

The ensuing autumn she had the pleasure to see him return, having now conceived for him the most tender attachment. Upon his visit the following season, she pre-

sented him with a fine daughter, born during his absence, and whom she had nursed with the fondest attention. With the infant in her arms, she had daily seated herself on the bank of the river, and followed the downward course of the stream, with her eye, to gain the earliest notice of his approach. Thus time passed on. The second year the father greeted a son, and obtained his squaw's reluctant consent to take their daughter with him on his return voyage to the country of the white people. But no sooner had he commenced his voyage, and although she had another charge upon which to lavish her caresses, than her maternal fondness overpowered her, and she ran crying and screaming along the river side in pursuit of the boat, tearing out her long flowing hair, and appearing to be almost bereft of reason. On her return home she gave away every thing she possessed, cut off her hair, went into deep mourning, and remained inconsolable. She would often say that she well knew that her daughter would be better treated than she could be at home, but she could not avoid regarding her own situation to be the same as if the Wahconda had taken away her offspring for ever.

One day, in company with six other squaws, she was engaged in her agricultural labours, her infant boy being secured to his cradle-like board, which she [226] had carefully reclined against a tree at a short distance. They were discovered by a war-party of Sioux, who rushed towards them, with the expectation of gratifying their vengeance by securing all their scalps. An exclamation from her companions directed her attention to the common enemy, and in her fright she fled precipitately, but suddenly recollecting her child, she swiftly returned full in the face of the Sioux, snatched her child from the tree, and turned to save its life, more precious than her own.

She was closely pursued by one of the enemy, when she arrived at a fence which separated her from the field of the trading house. A moment's hesitation here would have been fatal; and, exerting all her strength, she threw the child, with its board, as far as she could on the opposite side.

Four of the squaws were tomahawked, and the others escaped, of which number the mother was one, having succeeded in bearing off her child uninjured.

The trader, on his arrival at the settlements, learned that his white or civilized wife had died during his absence, and after a short interval devoted to the usual formalities of mourning, he united his destinies with another, and highly amiable lady. The second season his wife accompanied him on his annual voyage up the Missouri, to his trading house, the abode of his squaw.

Previously to his arrival, however, he dispatched a messenger to his dependents, at the trading-house, directing them to prevent his squaw from appearing in the presence of his wife. She was accordingly sent off to the village of her nation, a distance of sixty or seventy miles. But she could not long remain there, and soon returned with her little boy on her back, and accompanied by some of her friends, she encamped near her husband's residence. She sent her son to the trader, who treated him affectionately. On the succeeding day the trader sent for his squaw, and [227] after making her some presents, he directed her to accompany her friends who were then on their way to their hunting grounds.

She departed without a murmur, as it is not unusual with the Omawhaws to send off one of their wives, on some occasions, while they remain with the favourite one.

About two months afterwards the trader recalled her.

Overjoyed with what she supposed to be her good fortune, she lost no time in presenting herself before the husband whom she tenderly loved. But great was her disappointment, when her husband demanded the surrender of the child, and renounced for the future any association with herself, directing her to return to her people, and to provide for her future wellbeing in any way she might choose.

Overpowered by her feelings, on this demand and repudiation, she ran from the house, and finding a periogue on the river shore, she paddled over to the opposite side and made her escape into the forest with her child. The night was cold, and attended with a fall of snow and hail. Reflecting upon her disconsolate condition, she resolved to return again in the morning, and with the feelings of a wife and mother to plead her cause before the arbiter of her fate, and endeavour to mitigate the cruel sentence.

Agreeably to this determination, she once more approached him, upon whom she believed she had claims paramount to those of any other individual. "Here is our child," said she: "I do not question your fondness for him, but he is still more dear to me. You say that you will keep him for yourself, and drive me far from you. But no, I will remain with him; I can find some hole or corner into which I may creep, in order to be near him and sometimes to see him. If you will not give me food, I will, nevertheless, remain until I starve before your eyes."

The trader then offered her a considerable present, desiring her at the same time to go, and leave the [228] child. But she said, "Is my child a dog, that I should sell him for merchandize? You cannot drive me away; you may beat me, it is true, and otherwise abuse me, but I will still

remain. When you married me, you promised to use me kindly as long as I should be faithful to you; that I have been so, no one can deny. Ours was not a marriage contracted for a season, it was to terminate only with our lives. I was then a young girl, and might have been united to an Omawhaw chief; but I am now an old woman, having had two children, and what Omawhaw will regard me? Is not my right paramount to that of your other wife; she had heard of me before you possessed her. It is true her skin is whiter than mine, but her heart cannot be more pure towards you, nor her fidelity more rigid. Do not take the child from my breast, I cannot bear to *hear* it cry, and not be present to relieve it;¹ permit me to retain it until the spring, when it will be able to eat, and then, if it must be so, take it from my sight, that I may part with it but once."

Seeing her thus inflexible, the trader informed her that she might remain there if she pleased, but that the child should be immediately sent down to the settlements.

The affectionate mother had thus far sustained herself during the interview with the firmness of conscious virtue, and successfully resisted the impulse of her feelings; but nature now yielded, the tears coursed rapidly over her cheeks, and clasping her hands, and bowing her head, she burst into an agony of grief, exclaiming, "Why did the Wahconda hate me so much, as to induce me to put my child again into your power?"

The feelings of the unhappy mother were, however, soon relieved. Mr. Dougherty communicated [229] the circumstances of the case to Major O'Fallon, who immediately and peremptorily ordered the restoration of the

¹ A mode of expression common to the Indians, who are in the habit of communicating their ideas by allusions to the senses.— JAMES.

child to its mother, and informed the trader that any future attempt to wrest it from her should be at his peril.

As in civilized communities, so amongst the Indians, quarrels sometimes occur. There being no legal tribunal to appeal to, amongst the Missouri Indians, individuals often terminate their animosity by resorting to arms, and relying upon their own valour or address. This extremity is, however, sometimes obviated, by the soothing interference of relatives and friends, or by the violent interposition of a warrior.

Pugilism they despise, regarding it entirely beneath the dignity, even of an ordinary man, saying that it is only fit for the decision of the quarrels of children and squaws, and that when a man is called upon to decide a question by force, he ought to resort to the aid of mortal weapons.

Hard heart, chief of the Ioways, quarrelled with a trader, near the mouth of the Platte, and challenged him immediately to single combat, with any weapons he might choose, either agreeably to the manner of the whites, or to the usual Indian mode, of either combatant availing himself of opportunity or stratagem. The trader refusing to fight, Hard heart departed, declaring he would come again in the morning, in order to put him to death as a coward; "and," said he, "the Wahconda himself will not be able to save you." The trader, for security, assembled around his hut several Oto warriors as a guard, so that when the chief returned agreeably to his promise, to execute his threat, he could not gain admittance. After waiting a long time in vain, he at length sent word to the trader that he forgave him and would not injure him. The trader on receiving this information, having sufficient confidence in his good faith, dismissed his guards; and some time [230] afterward, we observed them riding to-

gether, on their return from the Pawnee villages, to which they had accompanied the Oto nation.

About a twelvemonth before our arrival at Engineer Cantonment, Hashea (the Cut-nose) and the Brave, two highly distinguished warriors of the Oto nation, had a very serious quarrel, which their friends could not perfectly adjust, but only succeeded in preventing a personal combat. Since our departure for the Rocky Mountains, Major O'Fallon informs us, that this hostility, still further aggravated by another incident, has terminated fatally. The nephew of the Brave grossly insulted, by his pertinaacious addresses, the wife of Hashea, whilst the latter warrior was absent on a war excursion. On his return, being informed of the indignity offered to his wife, he sought the offender, knocked him down with his war club, and beat him with great severity. The Brave was summoned by his friends, who seeing the bruised condition of his relative, vowed revenge. He provided a large sharp-pointed knife, and throwing his bison robe over his arm, by way of shield, he sallied out and passed twice through the village, uttering occasionally, with a loud voice, a challenge to Hashea to come forth, and decide their old quarrel by means of the knife. Hashea feared no man, and would have presented himself before his old enemy at the first call, but was prevented by some friends who were with him in his lodge; these, however, after the lapse of a short time, he contrived to elude, and swiftly sought the Brave. He threw down his blanket, and exclaimed, "You and I cannot live in the same nation; the time has arrived when one of us must die." They then closed in fight. The Brave had much the advantage; he was a large man, and his person was effectually protected by his robe, which received the thrusts of his adversary's knife, whilst at every

blow the weapon of the Brave was sheathed in the naked body of the interesting Hashea. [231] The latter was soon despatched, but as he staggered backwards under the grasp of death, he aimed a final blow at his antagonist, and had the gratification to see his blade enter his neck and pass far downward; at which he uttered a shout of exultation and died. The Brave's wound was mortal, but he lived long enough to see the features of Ietan, the friend of Hashea, bent in sternness upon him, and to hear him lament that the conqueror of his friend, should die without the agency of his arm. The deceased warriors belonged to the two most powerful bands of the nation. Hashea was a near kinsman of the Crenier, leader of one band, and the Brave was a brother of Shongotonga, leader of the other, and principal chief of the Otos. The consequence of the quarrel involved the whole nation, and to avoid farther hostilities the bands separated from each other, into distinct villages, in which situation they now remain.

The designations by which the Omawhaws distinguish their various degrees of consanguinity are somewhat different in meaning from ours. Children universally address their father's brother by the title of *father*, and their mother's brother by that of *uncle*; their mother's sister is called *mother*, and their father's sister *aunt*. The same relative designations extend to the step-parents, relatives, and to those of the grand-parents. The children of brothers and sisters address each other by the titles of brother and sister. Step-parents treat their step-children with as much kindness and attention as their own; and a stranger in the family would not perceive any partiality shown to the latter; indeed the natural parent exacts such a course of conduct from the other, and a separation would probably

ensue, from an opposite course being obstinately persevered in, as a parent will on no account suffer his or her offspring to be abused.

Natural children are generally retained by the [232] mother; but if she is willing to part with them, or at her death, they are received into the family of the father, where they experience the same kindness and attention as his other children; but an Indian will consider himself insulted, if he is told that he had no proper father or mother.

Some mothers of natural children will not permit them to visit the father, while she can controul them; they generally remain with the mother, and support her.

A man applies the title of *We-hun-guh*, or sister-in-law, to his wife's sister, until he takes her as his wife; he also calls his wife's brother's daughter *Wehunguh*, and may in like manner take her to wife: thus the aunt and the niece marry the same man.

A man distinguishes his wife's brother by the title of *Tahong*, or brother-in-law, and his son also by the same designation. He calls the wife of his brother-in-law *Cong-ha*, or mother-in-law.

A woman calls her husband's brother *Wish-e-a*, or brother-in-law, and speaks of his children as her own. Her husband's sister she distinguishes by the title of relationship, *Wish-e-cong*, or sister-in-law. Men who marry sisters address each other by the title of brother. All women who marry the same individual, even though not previously related, apply to each other the title of sister.

Remote degrees of consanguineous alliance are distinguished by their various appellatives, and are universally acknowledged.

It is a great singularity in the manners of the Omawhaws that neither the father-in-law nor mother-in-law will hold any direct conversation with their son-in-law; nor will he, on any occasion, or under any consideration, converse immediately with them, although no ill-will exists between them; they will not, on any account, mention each other's name in company, nor look in each other's faces; any conversation [233] that passes between them is conducted through the medium of some other person.

The Big Elk, Ongpatonga otherwise named Ar-re-cat-ta-wa-ho, which means Big Elk in the Pawnee language, married the daughter of Me-chah-pa, or the Horse-head. One day, on a visit to his wife, he entered the lodge of her father unobserved by him, who was busily engaged in playing with his dog, rubbing him with his hand, and frequently repeating his name, which unfortunately happened to be the same with that of the Big Elk in Pawnee. Mechahpa's wife, hearing her husband repeat this name in the presence of the son-in-law, after making many winks and signs without effect, arose from her seat and struck him violently with her fist upon the back, exclaiming, "You old fool! have [you no eyes to see who is present? you had better jump upon his neck, (meaning that of the Big Elk) and ride him about like a dog." "Wah!" ejaculated Mechahpa, in surprise, at the sudden and emphatical salutation, and understanding the meaning of the address, he ran out of the lodge in confusion.

This extraordinary formality is carried to a great length, and is very rigidly observed. If a person enters a dwelling in which his son-in-law is seated, the latter turns his back, covers his head with his robe, and avails himself of the first opportunity to leave the presence. If a person visit

his wife, during her residence at the lodge of her father, the latter averts himself, and conceals his head with his robe, and his hospitality is extended circuitously by means of his daughter, by whom the pipe is transferred to her husband to smoke. Communications or queries intended for the son-in-law are addressed aloud to the daughter, who receives the replies of her husband. The same formality is observed by the mother-in-law; if she wishes to present him with food, it is invariably handed to the daughter for him, or if she happens to be absent for the moment, it is placed on [234] the ground, and she retires from the lodge, that he may take it up and eat it. A ten year's separation will not change this custom. The Pawnees have no such formality, and on that account are said to be great fools.

A Frenchman, married and resident with the Omawhaws, one day inadvertently mentioned the name of his father-in-law, in presence of several people, who immediately declared him to be as great a fool as a Pawnee, thus to have so little respect for his father-in-law, as to treat him with as little ceremony as he would a dog.

The more distinguished and respectable the parties are, the more rigidly is this rule observed; and if either of the parties should be treated otherwise, the departure from the observance would be regarded as a mark of disrespect for a trifling fellow.

Fraternal affection is very strong and permanent. The chief and almost exclusive sources of infraction of this natural bias, are adultery with each other's wives, and conflicting intrigues for the attainment of the honour of a chieftain.

Two Omawhaw brothers had stolen a squaw from an individual of their nation, and were on their journey to

seek a refuge in the Puncaw village. But they had the misfortune, in a large prairie, to meet with a war-party of Sioux, their implacable enemies. They immediately concealed themselves in a deep ravine, which at bottom was covered with dry reed grass. The Sioux surrounded this spot, and set fire to the windward side of the reeds, in order to drive them out. When the conflagration had nearly reached the fugitives, one of the brothers remarked, that the Wahconda had certainly not created him to be smoked out like a racoon; (the Indians smoke this animal out of hollow trees by kindling a fire at the root;) he urged his brother to attempt his escape in one direction, whilst he would attract the attention of the enemy, by sallying out upon them alone, and [235] endeavouring to destroy as many of them as possible, in anticipated revenge for that death which he considered as inevitable; "One or both of us," said he, "must certainly be sacrificed; save yourself if you can; I will be the victim, and may fortunately receive a death-blow in the conflict, and thus escape the disgrace of captivity." He then rushed forth amongst the Sioux, shot one, and with his knife wounded several before he was dispatched. His brother availing himself of the abstracted attention of the enemy, effected his escape, but the squaw was burned to death. In this magnanimous self-devotion, the gallant brother exhibits an instance of chivalric heroism which would have immortalized a Roman warrior.

The young men are generally coupled out as friends; this tie is very strongly knit in youth, but is usually enfeebled by matrimony or the concerns of more advanced age; yet it is sometimes as lasting as the life of the individuals.

The Omawhaws, as we before observed, preserve no

account of their ages; they think that some evil will attend the numbering of their years. Me-chah-pa the Horse-head, who is an intelligent medicine man, asked one of our party, whom he was informed was an eminent medicine man of the white people, amongst many other questions, how old he was; he was answered, about forty-five, at which he expressed his regret that he had lived so long in the world, and to so little purpose.

Old age amongst the Omawhaws is generally loquacious, but it does not seem to be distinguished, as in civilized life, by an accumulation of maladies. Aged Indians, whether male or female, generally continue in apparent good health to the last, and the visitation of death is most frequently sudden and unexpected; an instance of this has already been related, which occurred to old Loutre, an individual of the Missouri nation.

[236] They become bowed and very much wrinkled with age, and their joints become less flexible. But their hair does not so generally change to gray as that of men in a state of civilization. The hair of the sides of the head, which is so frequently shorn or extracted, often assumes the gray appearance at a comparatively early age, and is almost universally of that tint in aged persons; whilst that of the top and back of the head, which is always permitted to attain a moderate length, is simply interspersed with a few grey hairs. Many aged squaws preserve the hair of the usual youthful colour; in others we observe an intermixture of gray, and it may be remarked that the aged of this sex are more frequently gray-haired than the men.

We saw a middle aged woman whose hair had pretty generally changed to gray; but this appearance at her age

was so unusual, that the Indians attributed it to her having infringed the injunctions of her medicine by eating forbidden food.*

In proportion as persons of either sex approach to the state of superannuation, the respect of their family and acquaintances is withdrawn from them, and they are finally regarded as useless burdens upon the community. They are subjected to the pranks and ridicule of the young people, which, however, they seem rather to invite by drollery, jokes, and stories, than to discourage by a repulsive demeanour.

The aged men contrive to render themselves useful by assisting the squaws in their culinary operations, and by haranguing; a service for which their loquacity eminently qualifies them.

The aged squaws can generally assist in light employments, such as making and mending mockasins, leggings, stringing beads, &c.; but during the rigours of winter they are generally seated near the door of the travelling lodge, partially defended from the cold by an old ragged robe, and occupied with [237] the menial service of pushing

* Humboldt observes of the natives of New Spain, that "their head never becomes gray. It is infinitely more rare to find an Indian than a negro with gray hairs; and the want of a beard gives the former a continual air of youth. The skin of Indians is also less subject to wrinkles." In this latter character, at least, it will be perceived, that our observations on the Missouri Indians do not coincide with those of the Baron, respecting the natives he describes. Ulloa informs us, that the symptoms of old age are a beard and gray hairs. But the natives of the region of the Missouri have certainly no greater density of beard, when advanced in age, than during their earlier years, though it is equally certain, that owing to a neglect of personal neatness, their beard is suffered to grow; yet, agreeably to our opportunities of judging, its ordinary character of sparse distribution is never changed.—JAMES.

Comment by Ed. Catlin notes the common occurrence of gray hair among the Mandan as a peculiarity of that people; see *Smithsonian Report*, 1885, part ii, p. 82. However, it was not unknown in other tribes.

up the half-burned pieces of wood to the fire, and driving out the dogs; in this situation they are more exposed to the weather than any other inmate of the tenement.

Though thus neglected, the aged are not permitted to suffer from hunger, when in the village, if food can be obtained. But when they become helpless on a march, and the transporting of them is attended with much difficulty, it is considered unavoidable to abandon them to their fate; with this view a small grass shelter is erected for them, in which some food is deposited, together with wood and water. When thus abandoned by all that is dear to them, their fortitude does not forsake them, and the inflexible passive courage of the Indian sustains them against despondency. They regard themselves as entirely useless, and as the custom of the nation has long led them to anticipate this mode of death, they attempt not to remonstrate against the measure, which is, in fact, frequently the consequence of their earnest solicitation.

In this situation the devoted man sings his war-songs to the Wahconda, narrating the martial exploits of his youth, and finally chaunts his death-song.

If on the return of the nation from the hunt, he is still living, his family or friends take him with them to the village, and guard him from want until the succeeding general expedition.

[238] CHAPTER II [XII]

Diseases — Medical and Surgical Knowledge — Drunkenness, and other Vices — Ideas of God, and of a Future State — Superstition, and Practice of the Magi — Expiatory Tortures.

THE Omawhaws endure sickness and pain with great fortitude; most of them, when thus afflicted, rarely uttering

a murmur. Their catalogue of diseases, and morbid affections, is infinitely less extensive than that of civilized men.

Rheumatism is rare, and gout appears to be unknown. No case of phthisis or jaundice fell under our observation. King's-evil is not uncommon, and although they have no reliance on the sanative touch of a king or chief, yet, as their practice seems confined to an inefficacious ablution with common water, many fall victims to the disease. Many are also afflicted with ulcers, which sometimes terminate fatally. Decayed teeth are rare. Plica polonica is unknown. Baldness seems to be also unknown, the hair being always retained, however advanced the age of the individual.

Nymphomania occurred in the person of a widow, who was thus afflicted about two months; her symptoms were attended with an effusion of blood from the nose. On her recovery, she attributed the disorder to the operation of some potent mystic medicine.

Hypochondriasis seems to be unknown. Canine madness also appears to be without an example, their dogs not having yet been visited by the disease. [239] They are rarely afflicted with dysentery, though children are sometimes subject to it in consequence of eating unripe fruits, such as plums, grapes, and maize. They are never known to be subject to the *coup de soleil*,^{*} although they travel for days and even weeks over the unsheltered prairies, without any covering whatever for the head, which is consequently exposed to the full radiance of the sun, both in a state of activity and quiescence. White men residing with them, and who have partaken in their hunts, and consequent insolation, have been visited with this distressing

^{*} Sunstroke.—ED.

affection, although their heads were protected invariably by hats or handkerchiefs.

The cuticle of these Indians is not known to have been acted upon by contact with poisonous plants, though white men travelling with them have experienced the effects of the usual deleterious properties of the poison vine (*rhys radicans*), which is, to a certainty, abundant in proper situations in the Missouri country. What effects would result from the application of this plant to the only part of the body of the Indian which is never exposed to the direct influence of external causes, is a subject deserving of experimental inquiry.

The hare-lip sometimes occurs, but it may be properly considered as still more rare than amongst white people.

Frosted limbs are treated by immersion in cold water, so as gradually to restore the lost temperature of the part. The magi also perform over them their mystic rites, amongst which the only topical application is made by chewing some roots and blowing the fragments, and accompanying saliva violently upon the part, with many antic capers.

Goiture and wens are not known. Fevers, and fever and ague, are exceedingly rare. Ophthalmic diseases, and casualties affecting the eye, are frequent. The eyes of children are sometimes injured or destroyed by missiles, in incautious play or juvenile [240] rencontres. But blindness is more frequently the effect of the gradual operation of disease. The eyes become sore and the lids inflamed; white opaque maculæ, after some time, appear in the eye, which enlarge until they cover it entirely, and prevent the ingress of light. It is probable that they possessed no rational remedy for this evil previously to their acquaintance with the traders, excepting the extracting of blood

from the temple by their process of cupping; the traders, however, have taught them to remove the opacity, by blowing burnt alum into the eye through a quill, a remedy so familiar in the veterinary art. To this disease children as well as adults are obnoxious.

Another ophthalmia, which also results in the destruction of the faculty of vision, commences with a superabundant secretion of the fluid of the lachrymal duct, succeeded by inflammation of the lids; the sight becomes gradually debilitated, until at length the pupil assumes an opake white appearance; probably fistula lachrymalis.

Temporary blindness, which sometimes eventuates in permanent loss of sight, occurs during the winter to incautious travellers who pass over the prairies covered with snow, from which the solar light is so brilliantly reflected. A party that accompanied Mr. Dougherty on a journey, being thus exposed, became unable to distinguish objects, and had not his sight been preserved, they might never have regained their stockade.

The blind are not neglected by their family and friends; on the contrary, we had several opportunities of observing them to be well clothed and fed, and much at their ease. When superannuated, however, they are not exempted from the fate attendant on that state.

An affection, or pain in the breast, distinguished by the name of Mong-ga-ne-a, seems to be the consequence of excessive indulgence in tobacco, and the [241] habitual inhaling of the smoke of it into the lungs. In their attempts to alleviate this complaint, the magi affect to extract from the part, by suction, balls and pellets of hair, and other extraneous substances, which they had previously concealed in their mouths for the purpose of deceiving the patient.

An individual applied to one of our party to cure him of this pain, but being advised to desist from the indulgence of tobacco smoking, he appeared rather willing to bear with his disease.

They sometimes say that their liver pains them, a disorder which they call Ta-pe-ne-a.

They are not exempt from catarrhs, the consequence of great exposure to sudden vicissitudes of temperature; a disease similar to the influenza is sometimes prevalent, and known by the name of Hoh-pa.

A deaf and dumb boy occurred in the Oto nation; an adult with a curved spine; and another with an inflexible knee, the leg forming a right angle with the thigh. But we have not observed any one of them with either eye deviating from the true line of vision.

The medical and surgical knowledge of the Omawhaws is very inconsiderable, and what there is, is so much blended with ceremonies, which to us appear superstitious, inert, and absurd, that it would seem, that, with the exception of a few instances, they have no reasonable mode of practice.

Sweating-baths are much in estimation, and are used for the cure of many ailments. These are temporary constructions, generally placed near the edge of a water-course; they are formed of osiers, or small pliant branches of trees, stuck into the soil in a circular arrangement, bent over at top so as to form a hemispherical figure, and covered in every part with bison robes. They are of different sizes, some are calculated to contain but a single individual, whilst others afford space for five or six at once. The invalid enters with a kettle of water and some heated [242] stones, on which the water is sprinkled until the steam produced is sufficient for his purpose. When they conceive that his perspiration has been as profuse as neces-

sary, he is taken out and plunged into the water, and even if the stream be covered with ice, this is broken to admit the patient. He is not subjected a second time to the action of the steam, but covers himself with his robe and returns home.

We did not learn that they possessed any knowledge of cathartic or emetic medicines. But as a substitute for the latter, a feather is thrust down the throat, until its irritating effect produces vomiting.

For the cure of cholic, warm topical applications are made, and the abdomen is kneaded with the fist.

They have no substitute whatever for opium, and we do not know that they have any for mercury.

For the alleviation of an internal local pain, a severe remedy is sometimes resorted to. A portion of the medullary substance of a plant, is attached to the skin over the part affected, by means of a little spittle; it is then touched with fire, and burns slowly down to the skin, upon which a vesication is soon produced, and accomplishes the object intended, of removing, at least for a time, the internal pain to the surface. This seems to be the only species of actual cautery made use of.

The Indians, who reside in the upper regions of the Missouri, practise bleeding for various ailments. This operation is sometimes performed with a knife or arrow point. At other times, and not unusually, a sharp stone is placed upon the part from which blood is to be drawn, and it is then struck with a stick, much in the same manner that veterinarians operate with the phlegm. They thus bleed in the arm, thigh, leg, &c.

They never dissect the human body, expressly for the purpose of acquiring a knowledge of its structure; but they have a general idea of the position of the vitals and

viscera, acquired upon the field of battle, [243] by their custom of hacking the carcasses of the slain; a knowledge which teaches them on what part of the body of an enemy to strike, in order that the wound may be mortal.

Gun-shot wounds are administered to by the magi, who powwow over them, rattle their gourds and sing, whilst they chew roots and blow out the fragments and saliva on the part. But the efficient practice in cases of wounds of this nature, is their system of depuration by means of suction; they apply their lips to the wound, and draw out the pus as it is secreted; by this mode of treatment they seem to be very successful in the cure of gun-shot wounds.

Amputation of limbs is not practised in their surgery.

The wound produced by the arrow, is treated much in the same manner with that of the gun-shot, after the weapon is thrust through the part, in the direction in which it entered; or, if this cannot be accomplished, the arrow is withdrawn, and the head or point being very slightly attached to the shaft, remains in the body, unless the wound is superficial, in which case it is cut out with a knife.

A broken limb is extended to its place, and enveloped with a leathern strap; the union generally takes place promptly, but the member usually remains more or less bent or crooked.

They have no rational mode of treating the scalp wound. A squaw who had been scalped, covered the part, after its edges had healed, with a peruke made of bison hair, until the hair on the other parts of her head became of sufficient length to conceal the deformity.

Dislocated members are reduced by extension, but with so little art, that they are frequently unsuccessful, and the limb remains permanently disjointed.

The Omawhaws are entirely destitute of all condiments, with the exception of salt, which, however, in their eating, they rarely use.

[244] Confirmed insanity appears to be unknown.

Every person, in any degree conversant with Indian manners and customs, is struck with their proneness to that most abominable and degrading of all vices, intoxication from the use of spirituous liquors. The Missouri Indians, collectively, form no exception to this general trait. A member of the Pawnee war party, which we so unfortunately encountered near the Konza village, was more solicitous to obtain a draft of this pernicious beverage, than to possess any other article within his view. We, however, persisted in refusing it to him, although he fell upon his knees, and laid his hands convulsively upon his breast and stomach, crying out, with a voice and manner of earnest supplication, "Whiskey, whiskey." The vice of drunkenness is yet, however, extremely rare in the Pawnee, as well as the Konza nation. But the Omawhaws are much addicted to it, and, with the exception of the chiefs, the indulgence does not, in any very considerable measure, degrade them in the estimation of their countrymen, who regard it as a delightful frolick; unless, indeed, the indulgence is permitted to grow into a habit.

To this cause, more especially than to any other, is perhaps attributable the depreciation of the influence of Ongpatonga, notwithstanding the efforts of his comparatively superior intellectual abilities.

The greatest offences and insults are overlooked if committed in this state, and even murder is palliated by it. The actions of drunken Indians, are as ridiculous and puerile as those of civilized drunkards; chiefs, warriors, and common men, roll indiscriminately on the earth to-

gether, or dance, caper, laugh, cry, shout, fight, or hug and kiss, and rub each other with their hands, in the most affectionate or stupid manner. If in the vicinity of white people, they appoint some of their number to remain sober, in order to prevent injury or insult being offered to them.

[245] The squaws sometimes tie them with cords, in order to preserve the peace, and are thanked for their precaution, when the subjects return to the dignity of reason.

Squaws, however, will themselves get drunk on certain occasions, and children are frequently intoxicated with liquor given them by the parents.

Whiskey, which is the only spirituous liquor they are acquainted with, is furnished to them freely by the traders; and the existing law of the United States, prohibiting the sale of it to the natives, is readily evaded, by presenting it to them with a view of securing their custom, not in direct, although implied exchange for their peltries. Nor is this greatest of evils in the power of the agent to remedy; and until traders are effectually interdicted, by law, from taking any whiskey into the country, even for their own consumption, it must, in defiance of his authority, continue to exist.

Whiskey is distinguished by the appellation of Pa-je-ne, or *fire-water*, the letter *j* having the French sound in pronunciation. The state of intoxication is called Ta-ne, a word which has a singular affinity with that by which they distinguish meat broth, or *meat water*; so great indeed is the similarity in sound between them, that to our ear they appear identical.

Intoxicating drinks do not appear to be ever made use of by the Omawhaws, for superstitious purposes.

This people believe firmly in an existence after death;

but they do not appear to have any definite notions as to the state in which they shall then be. And although they say that many reappear after death to their relatives, yet such visitants communicate no information respecting futurity. They consist of those only who have been killed either in battle with the enemy, or in quarrels with individuals of their own nation, and their errand is to solicit vengeance on the perpetrators of the deed.

[246] Futurity has no terrors to the dying Omawhaw, as he has no idea of actual punishment beyond his present state of existence. He, however, regrets the parting from his family and friends, and sometimes expresses his fears that the former will be impoverished, when his exertions for their support shall be withdrawn.

The Wahconda is believed to be the greatest and best of beings, the creator and preserver of all things, and the fountain of mystic medicine. Omniscience, omnipresence, and vast power are attributed to him, and he is supposed to afflict them with sickness, poverty, or misfortune, for their evil deeds. In conversation he is frequently appealed to as an evidence of the truth of their asseverations, in the words Wahconda-wa-nah-kong, the Wahconda hears what I say; and they sometimes add Mun-ekuh-wa-nah-kong, the earth hears what I say.

Whatever may be the notions of other Indian nations, we did not learn that the Omawhaws have any distinct ideas of the existence of the devil; or at least we always experienced much difficulty and delay, when obtaining vocabularies of this and some other languages in ascertaining corresponding words for *Devil* and *Hell*; the Indians would consult together, and in one instance the interpreter told us they were coining a word.

They say that after death, those who have conducted

themselves properly in this life, are received into the Wanooh-a-te, or town of brave and generous spirits; but those who have not been useful to the nation or their own families, by killing their enemies, stealing horses, or by generosity, will have a residence prepared for them in the town of poor and useless spirits; where, as well as in the good town, their usual avocations are continued.

Their Wahconda seems to be a Protean god; he is supposed to appear to different persons under different forms. All those who are favoured with his [247] presence become medicine men or magicians, in consequence of thus having seen and conversed with the Wahconda, and of having received from him some particular medicine of wondrous efficacy.

He appeared to one in the shape of a grizzly bear, to another in that of a bison, to a third in that of a beaver, or owl, &c., and an individual attributed to an animal, from which he received his medicine, the form and features of the elephant.

All the magi, in the administration of their medicine to the sick or afflicted, mimic the action and voice, variously exaggerated and modified, of the animal, which, they say, is their respective medicine, or in other words, that in which the Wahconda appeared to them.

When a magician is called to attend a sick person, he makes preparations for the visit by washing and painting with red clay; some of them dress fantastically, but others retain their ordinary apparel, which does not distinguish them from their neighbours; they take with them a dried gourd or skin, in which are some pebbles or plumstones, to make a rattling noise; the medicine bag is also an indispensable requisite, not for the active properties of its contents, but for the mystic virtues ascribed to them.

When in presence of his patient, he assumes the proper gravity of deportment, and commences his operations by smoking his pipe, and talking to his Wahconda; after this preparatory ceremony, the medicine bag is opened, and the contents displayed, consisting of ~~white and red earth~~, herbs entire or pulverized, &c. Portions of these are mixed with warm water, in small wooden cups, with which he is provided. Then, with a due degree of solemnity, he advances to his patient, and inquires into the nature of his ailment; he feels the part affected with his hand, and in case of local pain, he scarifies the part with a flint, and proceeds to suck out the blood, [248] having previously taken a small quantity of water in his mouth. He applies his lips to the wound, and sucks with great force, drawing a considerable quantity of blood, which he occasionally ejects into a bowl, in which some dirt or ashes had been previously sprinkled.

He makes much noise in the operation, by inhaling and expelling the air forcibly through his nostrils, and at the same time jerks his head from side to side, tugging at the part to facilitate the process. The depletion produced by this method, is sometimes so considerable that the patient becomes relaxed and pallid.

It has been remarked, that those practitioners have very tumid lips, and this remark is verified in those of Moncha-wahconda, or medicine grizzly bear, whom we have frequently seen.

If the patient has no local pain, the magician administers some of his simples, sometimes internally, but generally by friction between his warmed hands, and the breast or abdomen of the patient. At intervals during this operation, and after the termination of it, he rattles his gourd with violence, singing to it with great vehemence,

and throwing himself into grotesque attitudes. All this is sometimes daily repeated, until the convalescence or death of the patient.

A wealthy man, when sick, will sometimes send to a great distance for a celebrated practitioner, who, if not already engaged, removes with his family and lodge to the vicinity of the afflicted.

The compensation for all this attendance and powwowing, is proportioned to the violence and duration of the complaint, and to the wealth of the individual; it is frequently exorbitant, and consists of horses, kettles, blankets, &c., which, although they are never demanded, yet the magician does not fail to allude to some of them as objects of his wishes, and [249] the gratitude of the patient seldom fails on this occasion. If the patient dies, notwithstanding all this necromancy, he is said to be summoned by the Wahconda, and the fee or present to the magician is made by the relatives or friends of the deceased.

These men sometimes pretend to the spirit of prophecy. One of them ventured to predict, that two squaws who had recently married white men, would die in the course of a very short time, which he specified. The squaws being much alarmed at the prospect of approaching death, took with them some tobacco and other presents, and went in search of the prophet in order to prevail upon him to intercede for them with the Wahconda, and avert their doom. The husband of one of the squaws, a citizen of the United States, hearing of the occurrence, went to the lodge of the magician. He was surprised to see there the squaws perfectly naked before the magician, who had provided himself with a large kettle of warm water, and was himself engaged in squirting the water from his mouth over their persons. The husband, incensed at what appeared to

him to be nonsense and imposition, kicked over the kettle of holy water, and drove the squaws home to their lodges; but the magician, having received the presents, which were the objects of his swindling cunning, pretended that his incantation had had the desired effect with the Wahconda, inducing him to spare their lives.

Many are the impostures which these priests practise on the credulity of the people. And although they are frequently defeated in their attempts to deceive, and justly punished for their hypocritical villainy, yet the advantage of experience seems to profit them little, and deception, practised under a new garb, often attains its ends. How can we wonder at this facility, with which a simple people are blinded, through the medium of their superstitious faith, when we know that infinitely more [250] monstrous absurdities obtain the inconsiderate assent, or excite the fears of thousands of civilized men, in the most populous and enlightened cities of Europe and America, and that the horse-shoe, even at this day, is frequently seen attached to the threshold of a door, as a security against the entrance of a witch?

One of these magi acquired a high reputation in several of the Missouri nations, by impressing them with the belief, that his body was indestructible to human power, and that if cut into a thousand fragments, and scattered to the winds, these portions would all promptly assemble together again, and become revived, so that he would receive no injury from the operation. Trusting to his fame, on some slight provocation, he killed a squaw in the midst of her own people, and with the most unbounded confidence, surrendered himself to her exasperated relatives, declaring with exultation that they possessed not the power to harm him.

Unexpectedly, however, they put his vaunted supernatural constitution to the test, by dividing his body into pieces, and scattering them about the vicinity of the village.

They are so entirely habituated to practising the arts of deception, that it would seem they sometimes persuade themselves that what was at first only feigned, is in truth reality, and that their magic absolutely possesses its attributed healing virtue. One of these men, being on a visit to the Pawnee villages, was present at a kind of grand incantation, during which many extraordinary feats were exhibited. He there saw, for the first time, the mountebank trick, of appearing to cut off the tongue, and afterwards replacing the severed portion without a wound. "There," said Katterfelto, "your medicine is not strong enough to enable you to perform this operation." The stranger, jealous of his national honour, and unwilling to be exceeded, unhesitatingly [251] drew forth his knife, and actually cut off nearly the whole of his tongue, and bled to death before their eyes.

In the country of the Crow Indians, (Up-sa-ro-ka,) ¹⁰ Mr. Dougherty saw a singular arrangement of the magi. The upper portion of a cotton-wood tree was implanted with its base in the earth, and around it was a sweat house, the upper part of the top of the tree arising through the roof. A gray bison skin, extended with oziers on the inside so as to exhibit a natural appearance, was suspended above the house, and on the branches were attached several pairs of children's mockasins and leggings, and from one of the limbs of the tree, a very large fan made of war eagle's feathers was dependent.

¹⁰ The Crows, whom the French called *Gens des Corbeaux*, were an important tribe of the Siouan family. Lewis and Clark estimated their numbers at three thousand five hundred; they lived on the Yellowstone River. Nearly two thousand still reside on the Crow reservation in Montana.—ED.

The Missouri Indians believe earthquakes to be the effect of supernatural agency, connected, like the thunder, with the immediate operations of the Master of Life. The earthquakes which, in the year 1811, almost destroyed the town of New Madrid of the Mississippi, were very sensibly felt on the upper portion of the Missouri country, and occasioned much superstitious dread amongst the Indians. During that period, a citizen of the United States resided in the village of the Otos, trading for the produce of their hunts. One day he was surprised by a visit of a number of Otos in anger. They said that a Frenchman, who was also trading in the village, had informed them, that the Big-knives had killed a son of the Master of Life; that they had seen him riding on a white horse in a forest country, and being of a sanguinary disposition, they had waylaid and shot him. And it was certainly owing to this act that the earth was now trembling before the anger of the great Wahconda. They believed the story implicitly, and it was with no little difficulty that the trader divested his own nation of the singular crimination.¹¹

[252] As connected with the superstitions of the Missouri Indians, we may mention some anecdotes that came to our knowledge. First, of the Me-ma-ho-pa or medicine stone of the *Gros ventres*, or Minnetarees.¹² This is a large,

¹¹ Many individuals attach small bags, of the size of the end of the thumb, to various parts of their dress, as talismanic preventives of personal injury. The custom of sacrificing their clothes to the medicine is unknown to the Omawhaws, but it is practised with the Upearoka and some other nations.— JAMES.

¹² The tribe here mentioned belonged to the Siouan family, and its numbers were estimated by Lewis and Clark at two thousand five hundred. Their chief village was situated on Knife River, North Dakota. Minnetaree means "to cross water;" Grosventres is French for "Big Bellies." The proper name of this tribe is Hidatsa, which distinguishes it from an unrelated tribe farther west, to which both of the former appellations are sometimes applied — generally with the addition "of the Prairie;" the Hidatsa being known as Grosventres

naked, and insulated rock, situate in the midst of a small prairie, at the distance of about two days' journey, southwest of the village of that nation. In shape it resembles the steep roof of a house. The Minnetarees resort to it, for the purpose of propitiating their Man-ho-pa or Great Spirit, by presents, by fasting, and lamentation, during the space of from three to five days.

An individual, who intends to perform this ceremony, takes some presents with him, such as a gun, horse, or strouding, and also provides a smooth skin, upon which hieroglyphics may be drawn, and repairs to the rock accompanied by his friends and magi. On his arrival, he deposits the presents there, and after smoking to the rock, he washes a portion of the face of it clean, and retires with his fellow devotees to a specified distance. During the principal part of his stay, he cries aloud to his god to have pity on him; to grant him success in war and in hunting; to favour his endeavours to take prisoners, horses, and scalps from the enemy. When the appointed time for lamentation and prayer has elapsed, he returns to the rock; his presents are no longer there, and he believes them to have been accepted and carried off by the Manhopa himself. Upon the part of the rock, which he had washed, he finds certain hieroglyphics traced with white clay, of which he can generally interpret the meaning, particularly when assisted by some of the magi, who were no doubt privy to the whole transaction. These representations are supposed to relate to his future fortune, or to that of his family or nation; he copies them off with pious care [253] and

(or Minitaree) "of the Missouri." Their numbers were thinned by an epidemic in 1837, and in 1845 they removed some sixty miles farther up the Missouri, where they were joined by the Mandan, and later (1862) by the Arikara. About four hundred and fifty Hidatsa now live on the Fort Berthold Reservation, in North Dakota.—ED.

scrupulous exactness upon the skin which he brought for the purpose, and returns to his home, to read from them to the people, the destiny of himself or of them. If a bear be represented, with its head directed towards the village, the approach of a war party, or the visitation of some evil, is apprehended. If, on the contrary, the tail of the bear be towards the village, nothing but good is anticipated, and they rejoice. They say that an Indian, on his return from the rock, exhibited to his friends, on his hieroglyphical chart, the representation of a strange building, as erected near the village; they were all much surprised and did not perfectly comprehend its meaning; but four months afterwards, the prediction was, as it happened, verified, and a stockade trading house was erected there, by the French trader Jessaume.¹³

Lewis and Clark inform us that the Mandans have a similar oracle.

At the distance of the journey of one day and a half from Knife-creek,¹⁴ which divides the larger and smaller towns of the Minnetarees from each other, are situate two conical hills, separated by about the distance of a mile. One of these hills was supposed to impart a prolific virtue to such squaws as resorted to it for the purpose of crying and lamenting, for the circumstance of their having no male issue.

A person one day walking near the other mount, fancied

¹³ See sketch of Jessaume given in Bradbury's *Travels*, in our volume v, note 94.—ED.

¹⁴ There are two streams in the Minnitarree country now bearing the names respectively of Knife River and Little Knife River. The former flows from the west and debouches in Mercer County, North Dakota, just above Lewis and Clark's camp (Fort Mandan) in the winter of 1804-05. Little Knife River flows from the northeast; its mouth is at the northern line of the Fort Berthold Indian reservation.—ED.

he observed upon the top of it, two very small children. Thinking they had strayed from the village, he ran towards them to induce them to return home; but they immediately fled from him, nor could his utmost speed overtake them, and in a short time they eluded his sight. Returning to the village, the relation of his story excited much interest, and an Indian set out next day, mounted on a fleet horse, to take the little strangers. On the approach of this individual to the mount, he also saw the children, who ran away as before, and although he endeavoured to overtake them by lashing the horse into [254] his utmost swiftness, the children left him far behind. But these children are no longer to be seen, and the hill once of singular efficacy in rendering the human species prolific, has lost this remarkable property — A change, which the magi attribute to the moral degeneracy of the present generation of the *Gros ventres*. Thus, like many of the asserted supernatural occurrences in the civilized world, these are referred back, in their obscure tradition, “out of harm’s way.”

Lewis and Clark, however, inform us, that the Sioux have a belief somewhat similar, respecting a hill near Whitestone River,¹⁸ which they fable to be at present occupied by a small and dangerous race of people, about eighteen inches high, and with remarkably large heads, who, having killed three Omawhaws a few years since, have inspired all the neighbouring Indians with a superstitious dread. Although these intrepid travellers visited the haunted hill, they were happy enough to escape the vengeance of its Lilliputian inhabitants.

With this absurd, but somewhat poetical fable, may be classed the asserted discovery of Lilliputian skeletons of men on the banks of the Merameg river, and the oste-

¹⁸ The present Vermillion River, of Clay County, South Dakota.— ED.

ological acumen of the discoverers of those relics, may derive all the support which their theory is susceptible of receiving, from the story of these visionary beings.

Annually, in the month of July, the Minnetarees celebrate their great medicine dance, or dance of penitence, which may well be compared with the Currack-pooja of the expiatory tortures of the Hindoos, so often celebrated at Calcutta. On this occasion a considerable quantity of food is prepared, which is well cooked, and served up in their best manner. The devotees then dance and sing to their music at intervals, for three or four days together in full view of the victuals, without attempting to taste of them. But they do not, even at this time, forego [255] their accustomed hospitality. And if a stranger enters, he is invited to eat, though no one partakes with him. On the third or fourth day, the severer expiatory tortures commence, to which the preceding ceremonies were but preludes. An individual presents himself before one of the officiating magi, crying and lamenting, and requests him to cut a fillet of skin from his arm, which he extends for that purpose. The devout operator thrusts a sharp instrument through the skin near the wrist, then introduces the knife, and cuts out a piece of the required length, sometimes extending the excision entirely to the shoulder. Another will request bands of skin to be cut from his arm. A third will have his breast flayed, so as to represent a full moon or crescent. A fourth submits to the removal of concentric arcs of skin from his breast. A fifth prays the operator to remove small pieces of skin from various indicated parts of his body; for this purpose an iron bodkin is thrust through the skin, and the piece is cut off, by passing the knife under the instrument.

Various are the forms of suffering which they inflict upon

themselves. An individual requests the operator to pierce a hole through the skin of each of his shoulders, and after passing a long cord through each of these holes, he repairs to a Golgotha at some distance from the village, and selects one of the bison skulls collected there. To the chosen cranium he affixes the ends of his cords, and drags it in this painful manner to the lodge, round which he must go with his burden, before he can be released from it. No one is permitted to assist him, neither dares he to put his own hands to the cords, to alleviate his sufferings. If it should so happen that the horns of the cranium get hooked under a root or other obstacle, he must extricate it in the best manner he can, by pulling different ways, but he must not touch the rope or the head with his hands, or in any respect attempt to relieve the painful strain upon his wounds, until his complete task is performed.

[256] Some of the penitents have arrows thrust through various muscular parts of their bodies, as through the skin and superficial muscles of the arm, leg, breast, and back.

A devotee caused two stout arrows to be passed through the muscles of his breast, one on each side, near the mam-mæ. To these arrows cords were attached, the opposite ends of which were affixed to the upper part of a post, which had been firmly implanted in the earth for the purpose. He then threw himself backward, into an oblique position, his back within about two feet of the soil, so as to depend with the greater portion of his weight by the cords. In this situation of excruciating agony, he continued to chaunt and to keep time to the music of the gong, until, from long abstinence and suffering, he fainted. The bystanders then cried out, "Courage, courage," with much shouting and noise; after a short interval of insensibility he revived, and proceeded with his self-inflicted tortures

as before, until nature being completely exhausted, he again relapsed into insensibility, upon which he was loosed from the cords, and carried off amidst the acclamations of the whole assembly.

Another Minnetaree, in compliance with a vow he had made, caused a hole to be perforated through the muscles of each shoulder; through these holes cords were passed, which were, at the opposite ends, attached by way of a bridle to a horse, that had been penned up three or four days without food or water. In this manner, he led the horse to the margin of the river. The horse, of course, endeavoured to drink, but it was the province of the Indian to prevent him, and that only by straining at the cords with the muscles of the shoulder, without resorting to the assistance of his hands. And notwithstanding all the exertions of the horse to drink, his master succeeded in preventing him, and returned with him to his lodge, having accomplished his painful task.

[257] The Wolf chief,¹⁸ one of the most eminent of the warriors of the upper village of the Minnetarees, on one occasion, sat five days, singing and lamenting, without food, on a small insulated and naked rock in the Missouri river. And it is firmly believed that he did not even palliate his urgent wants by tasting the water during this long probation.

Many of the Minnetarees believe that the bones of those bisons, which they have slain and divested of flesh, rise again clothed with renewed flesh, and quickened with life, and become fat, and fit for slaughtering the succeeding June. They assert that some of their nation, who were formerly on a hunting excursion, lost one of their party, a boy, and returned to the village lamenting his loss, and

¹⁸ See Bradbury's *Travels*, in our volume v, note 99.—ED.

believing him to have been killed by the Sioux nation, with whom they were then at war. Some time afterward, a war party was assembled, that departed to revenge the supposed murder of the boy. During their journey, they espied a bison, which they pursued and killed. When lo! on opening the abdomen of the animal, what was their astonishment to observe the long-lost boy, alive and well, after having been imprisoned there one entire year. Relieved from his animated prison-house, he informed them, that, when he left his hunting companions, he proceeded onward a considerable distance, until he was so fortunate as to kill this bison. He removed the flesh from one side of the animal, and as a rainy inclement night was approaching, he concluded to take shelter within the body of the animal, in place of the viscera, which he had taken out. But during the night, whilst he slept, the flesh of the bison that he had cut off, grew over the side again, and effectually prevented his getting out, and the animal being restored to life, he had thus been pent up ever since.

Such anecdotes, however puerile and absurd they may be, if characteristic, lead us to a more accurate [258] and complete knowledge of the manners and habits of the people, than still more copious general remarks and reflections.

The Minnetarees, in common with several other nations of our Indians, have the strange tradition of their origin, that they formerly lived underground. "Two boys," say they, "strayed away from them, and absented themselves several days. At length they returned and informed the nation that they had discovered another world, situate above their present residence, where all was beautiful and light. They saw the sun, the earth, the Missouri, and the bison. This account so delighted the people, that they

immediately abandoned their subterranean dwelling, and, led by the boys, arrived on the surface of the earth, at the spot which their villages now occupy, and where they have dwelt ever since.

“Soon after they had established themselves in this new world, a party of strange men appeared mounted on horses. They attacked these wonderful Centaurs with their bows and arrows, and succeeded in killing one of them, on which the others fled. Not at first perceiving that the man and horse were two distinct animals, they were surprised to see the former fall to the earth, as if one part of the compound animal was dead and the other part still active, having received no injury. They at length succeeded in securing the horse, and after admiring the beauty of his form, and becoming familiar with him, they proceeded to tie one of their young men upon his back with cords, that he might not fall off; the horse was then led cautiously by the bridle, until finally he became sufficiently fearless to ride alone.”

They seem to have full faith in the notion that, at their death, they will be restored to the mansions of their ancestors under ground, from which they are intercepted by a large and rapid watercourse. Over this river, which may be compared to the Styx of the ancients, they are obliged to pass on a very narrow [259] footway. Those Indians who have been useful to the nation, such as brave warriors or good hunters, pass over with ease, and arrive safely at the A-pah-he, or ancient village. But the worthless Indians slip off from the bridge or footway, into the stream that foams beneath in the swiftness of its course, which hurries them into oblivion, or Lethe. The Mandans, according to Lewis and Clarke, have a tradition somewhat similar, and it strongly reminds us of the Alsirat of Mahomet, over which, it was supposed, that great leader was

to conduct his Moslems to the bliss of futurity, whilst the unworthy were precipitated into the gulf which yawned beneath it.¹⁷

CHAPTER III [1]¹⁸

Death — Mourning for the Deceased — Physical Character — Senses — Manufactures and Arts — Domestic and Warlike Implements — War.

WHEN an Omawhaw dies, his kinsmen and friends assemble around his body, and bewail their loss with loud lamentation, weeping, and clapping of hands. Ong-pa-ton-ga, being once on a visit to St. Louis, observed a number of cattle gathering about a spot, where one of their kind had been recently slaughtered, smelling the blood, and pawing the earth; he said they behaved very like his own people, on the death of a relative.

They suffer the deceased to remain but a short time previously to interment, and often bear the body to the grave, before the warmth of vitality is entirely dissipated. The body is enveloped in a bison robe, or blanket, which is secured by a cord. It is then carried to the grave on the shoulders of two or three men, and followed by the greater portion of the mourners, without any order. The grave is an oblong square, of sufficient length, and four or five feet deep. The body is placed in the grave, and [2] with it a pair or two of mockasins, some meat for food, and many little articles and comforts, the gifts of affection, to be used on the long journey which the de-

¹⁷ On the history and traditions of the Hidatsa, see Matthews, "Ethnography and Philology of the Hidatsa Indians," in U. S. Geological and Geographical Survey of the Territories, *Miscellaneous Publications*, No. 7 (Washington, 1877).— Ed.

¹⁸ Chapter i of volume ii of the original London edition.— Ed.

ceased is supposed to be about to perform, in order to arrive at the Wa-noch-a-te, or town of brave and generous spirits. The grave is then filled with earth, and a small tumulus is raised over it, proportioned in magnitude to the dignity of the deceased. The relatives bedaub their persons with white clay, scarify themselves with a flint, cut out pieces of their skin and flesh, pass arrows through their skin; and, if on a march, they walk barefoot at a distance from their people, in testimony of the sincerity of their mourning.

For a considerable time, they nightly visit the grave of the deceased, to lament over it. A sorrowing relative may be seen, of a bleak wintry night, bending over the grave, clad in a scanty robe, which scarcely conceals the middle of the back, as an additional self-punishment and unequivocal manifestation of grief.

For the death of a brave warrior, or of a chief, the lamentation is more general, and many of those who visit the body previous to its removal, present to it blankets, bison robes, breech-cloths, and mockasins, which are sometimes thus accumulated in considerable numbers; of these presents, part is retained by the orphans, if any, but the greater number is entombed with the body. Over the grave of a person of this description, a kind of roof or shelter is constructed, of pieces of wood reared against each other, and secured at top, then sodded over with grass sod.

The season prescribed by custom for mourning, is a period of from seven to twelve months; during this time the violent expressions of their grief gradually diminish, and towards the expiration of the allotted season, the state of mourning is only manifested by the coating of white clay, and even this, like the black apparel of civilized

mourners, is at length [3] dispensed with, and with the same decorous gradation.

A cruel proof of heartfelt grief, is exhibited by some of the natives, on the upper parts of the Missouri; they cut off joints of their fingers; the individual cuts the skin and ligaments of the joint with his common eating knife, then places the joint between his teeth, and twists it off with violence, the teeth performing at the same time the offices of a wedge and a vice.

In form, the Missouri Indian is symmetrical and active, and in stature, equal, if not somewhat superior, to the ordinary European standard; tall men are numerous. The active occupations of war and hunting, together perhaps with the occasional privations, to which they are subjected, prevents that unsightly obesity, so often a concomitant of civilization, indolence, and serenity of mental temperament.

From this representation of the physical man, it is obvious that our observations do not correspond with those of Humboldt, regarding the natives of Canada, Florida, and New Spain, in as far as he represents them with the "squat body."

The forehead retires remarkably backward, and the posterior part of the head (occiput) has a flatness of appearance, attributable, perhaps, to the circumstance of its having rested so constantly during infancy, on the surface of a board, or on the scarcely less yielding interposed pad or pillow. Yet that organ, to which, in the phrenological system, the seat of amativeness is referred, although not usually very prominent, is still marked and distinct.

The facial angle of the cranium has been represented by Blumenbach at 73 degrees, an obliquity which induced

him to place the American Indian in his series of the varieties of the human race, as the fourth in number.

But his observations were made upon the cranium of a Carib, than which people, as Humboldt justly [4] remarks, "there is no race on the globe in which the frontal bone is more depressed backwards, or which has a less projecting forehead." This observation will not rigidly apply to the western Indian, who certainly possesses a greater verticality of profile. Agreeably to the mensurations of Doctor Harlan,¹⁰ a cranium, which we obtained on the plains of the Platte, exhibits an angle of 78 degrees — A Wabash male 78°, female 80°, and a Cherokee only 75°.

The hair is coarse, black, glossy, and dense upon the head, sparse and slender upon the chin, independently of the custom of extirpating it, but although the hair is certainly oval in its transverse section, yet we could not perceive, that, in this respect, its proportions exceeded our own.

The line of the direction of their eyes is nearly rectilinearly transverse, being in this respect intermediate between the arcuated line of the eyes of the white man, and that of the Indians of New Spain, who, according to Humboldt, have the corner of the eye directed upward towards the temples.

The nose is generally prominent, and either aquiline or Roman, with the wings not more dilated than those of white men. This form of nose is so prevalent, as to be regarded as the most beautiful; it is no small compliment

¹⁰ Richard Harlan (1796-1843) was a prominent physician of Philadelphia, and member of many learned societies. At the time of publication of the account of Long's expedition, he was professor of comparative anatomy in the Philadelphia museum. At the time of his death at New Orleans (1843), he was vice-president of the Louisiana Medical Society.— Ed.

to tell a person that his nose is like that of a mule; and beauty is indicated in their language of signs, by placing an arcuated finger upon the face in imitation of the aquiline curve. The *pug-nose*, and the more common form of the noses of the white Americans, of a concave outline, are regarded as remote from the standard of beauty.

The lips are more tumid than those of the white American, but very far less so than those of the negro.

The lower jaw is large and robust; the teeth are very strong, with broad crowns. The chin is well formed.

[5] The cheekbones are prominent, but not angular like those of the Mongul, and stamp a peculiarity on the contour of the face, characteristic of the American Indian.

The expression of the countenance is austere, often ferocious.²⁰

Very few of them are left-handed, perhaps even a smaller number of them use the left hand in preference to the right, than is observable among white men.

The squaw differs from the males, in having a more squat figure, or is shorter and more thick bodied, with a much broader face.

The colour of the Indian is, according to Volney, that of the skin of smoked bacon ham. It is sufficiently obvious that this colour is independent of climate; those parts of the body, which are, and, agreeably to their representations, always have been, perfectly shielded

²⁰ The gravity of the Indian is almost proverbial: he will smile, but he rarely laughs. He does not indulge in badinage, or unnecessary remarks respecting the weather, merely for the purpose of talking, and generally addresses his companions in a low voice, and with few words, excepting in council, when his elocution is loud, rapid, and vehement: the voice is full, harsh, and somewhat guttural. The squaw, not unfrequently, offers a perfect contrast in this respect, in her vivacious demeanour, shrill loquacity, and pleasant smile, and laugh, readily excited.— JAMES.

from the action of the rays of the sun, from their youth upward, are, notwithstanding, of the same tint with the face, which is never covered.

In walking they preserve a perfectly upright carriage of the person, without any thing of the swinging gait so universal with the white people, which is regarded by them as excessively awkward, and which they imitate in their sports to excite the merriment of the spectators, though not in the presence of those whom they thus ridicule.

In stepping the feet are universally placed upon the ground in a parallel manner with each other; they say that turning out the toes in walking, as well as turning them inward, is a very disadvantageous mode of progression, in high grass or in narrow pathways.

The peculiar odour diffused by the body of the Indian, seems to be caused, not so much by the cutaneous transpiration, as by the custom of rubbing themselves with odoriferous plants, and with bison [6] grease. They also sometimes make necklaces of a sort of sweet-scented grass, and suspend small parcels of it about their persons. The various kinds of pigments, with which they overspread their persons, may also be partially operative in producing this effect; and the *ninnegahe*, which they are so constantly habituated to smoke, is doubtless another agent.

The odour of the Indian is rather agreeable than otherwise to many, and that diffused by the persons of the Pawnee war party near the Konza village, increased by a profuse perspiration from the violence of their exercise in running, was rather pleasant to most of the members of our party. The *Upsaroka* or Crow Indians, are said to anoint themselves with castor.

To the acute sense of smelling of the Indian, the odour of the white man is far from pleasant, and is often particularly remarked by the squaw to be offensive.

Their sense of hearing is remarkably acute; ordinary conversation amongst the men, as we have before observed, is conducted in a low tone of voice; often when you suppose from the compass of the speaker's voice, that he is addressing a person at his elbow, he is, in reality, directing his discourse to one on the opposite side of the room, or at a considerable distance. The ordinary conversation of the women is in a much louder tone than that of the men. Partial deafness, however, is not uncommon.

The memory of the Omawhaw is exceedingly retentive.

The Omawhaw seldom renders himself unhappy with gloomy anticipations of the future, but almost literally takes "no care for the morrow." He will say to his squaw, "cook what meat you have, for the Wahconda will give us more to-morrow, and if not to-morrow, next day, and if never, let us eat what we have got."

[7] They have but little mechanical ingenuity, but an individual of this nation, who is now no more, without acquiring any knowledge of the white people, as far as we could learn, mended the guns and traps of his countrymen, when not too seriously injured. But they have not attempted to repair either, since his death.

They rarely construct skin canoes; they make war-clubs, rude saddles, hair ropes, stone pipes, wooden bowls, horn spoons, and many personal ornaments.

The squaws make mockasins and leggings variously ornamented; and handsome necklaces, wrought with beads of different colours, which are symmetrically strung upon red silk, or thread coloured with vermillion. In the manufacture of this common, and much admired

article of dress, ten double threads are attached by one end to a small *wang* or shred of leather, which is firmly stretched and fixed transversely to the work; each double thread is placed at such a distance from the adjoining ones, as to give room for the beads. These are then strung on, one upon each double thread; by this operation a transverse row of beads is formed upon the work, parallel to the *wang*; this being done, the left hand double thread is passed to the right, not over and under, but through all the other double threads, parallel to, and in contact with the row of beads, and in this position occupies the situation of woof or *filling*; but its extremity is continued along on the right side of the work, so as to resume, in that portion of its length, the character of warp or *chain*. Another row of beads is now put on; after which the next left hand double thread is passed through each of the others to the right of the work, as the previous one had been.

They also make handsome garters for supporting the leggings below the knee, of the breadth of the hand; they are formed of beads strung on worsted yarn.

[8] Their art of painting is very rude, yet they manage to give some idea of a battle, by graphic representations in colour, on a bison robe. In the same manner are depicted the various animals, which are the objects of their hunts. These robes are also decorated with blue, red, and black broad lines, forming various designs; indeed it is very common to see a robe thus ornamented, worn by an Omawhaw.

The art of sculpture is also in its rudest state, and is almost limited to the ornamenting of the war-club with indented lines, forming different angular figures.

Their persons are often neatly tattooed in straight

lines, and in angles on the breast, neck, and arms. The daughters of chiefs, and those of wealthy Indians, generally are denoted by a small round spot, tattooed on the forehead. The process of tattooing is performed by persons, who make it a business of profit. Their instrument consists of three or four needles, tied to the truncated and flattened end of a stick, in such an arrangement that the points may form a straight line; the figure desired is traced upon the skin, and some dissolved gunpowder, or pulverized charcoal, is pricked in with this instrument, agreeably to the figure. The operator must be well paid, and hence it is not every one that can conveniently sustain the expense of having this distinguishing mark placed on the forehead of his children.

Their astronomical knowledge is very limited. They distinguish the north star (Polaris), and are aware of its being apparently stationary, while the others seem to revolve. Venus is known by the name of *Me-ka-ka-tun-guh*, or big star. The constellation of the seven stars (Pleiades), is called *Tapa*, or deer's head. The constellation of the great bear (Ursa major), is distinguished by the term *Wa-ba-ha*, or car for transporting sick or wounded [9] persons on a march. The galaxy is called *Wahconda-o-jun-ga*, or the path of the Master of Life. When the moon is eclipsed, they say *Me-om-botts*, or the moon is dead; and when the sun is eclipsed, they say the sun is dead. A comet they denominate *Me-ka-ka-nare*, or blazing star; this name, at least, was given to the comet of 1811; they regarded it as portending the death of some great chief; and as it happened, one of the great Pawnee chiefs did die the same year, which confirmed them in their notion. The three stars of Orion's belt, are called *Me-huh-se*, or the goose-foot.

Wangewaha, the Hard Heart, chief of the Ioways, has made himself considerably acquainted with the manners of the white people; he surprised Mr. Dougherty one day by inquiring, if it is true that the earth revolves round the sun; he was of course answered in the affirmative; when a sarcastic Indian of a group sitting near, was overheard to say in a low voice, that it was indeed a pretty story to tell them, when any person could see the sun rise there, pass along in that direction, and set there (pointing with his finger to the apparent course of the luminary).

The day is divided into morning, noon, evening, and night; and respectively indicated by the words, *Cas-aht-te*, *Me-o-kons-ka*, *Paz-za*, and *Hon-da*. Any particular hour of the day is denoted by pointing to the apparent place of the sun at the specified time. The years are denoted by the number of winters, and the months by lunations.

Their geographical knowledge of the country over which they roam is remarkably exact. They know intimately every river and creek in the vicinity of the Missouri, from Grand river up to the Arickaree nation, on the left side of the river, and as far down as the Osage river on the right, and south as far as the Black Hills, together with their courses and distances.

[10] Mr. Dougherty, accompanied with two or three young Indians, arrived at an Omawhaw hunting encampment, late in the evening, and, after inquiring at several of the lodges, at length entered the one in which he intended to remain. Being asked by which way he had come, he pointed out, as he thought, the true direction; at this his fellow travellers smiled, and told him he was mistaken. He was not undeceived till he went out

of the lodge to observe the direction they had indicated, when he became satisfied of their correctness. They had, however, been less frequently in that part of the country than he had been; but they had, without doubt, instinctively noted all the changes of the direction which they had made in winding through the temporary village, for they could not avail themselves of previous local knowledge.

But although they are remarkably accurate in their knowledge of the proper direction in which to travel, in order to reach a given point, yet they are often lost during foggy days, or during heavy snow storms.

Their culinary utensils are few in number, and simple in kind. The original earthenware pots are now rarely used by the nations on the lower part of the Missouri, being substituted by brass kettles, which they procure from the traders in exchange for their peltries. The Pawnees, however, whose intercourse with the whites has been less considerable than that of the nations bordering more closely on the Missouri, still employ earthen vessels, and yet continue the limited manufacture of them. These vessels are not glazed, and resemble in composition the antique fragments of Indian earthenware, found in various parts of the United States; the mementos of a numerous people, that have been destroyed by obscure causes, as well as by the avaricious policy, and cruelly unjust and barbarous encroachments of [11] a people, professing the mild doctrines of "peace on earth and good will to men."

Food is served up in wooden bowls, of a very wide and simple form, and of various sizes, generally carved, with much patient application, out of a large knot or protuberance of the side of a tree. The spoon is made of bison

horn, and is of a large size; the handle, variously ornamented by notching and other rude carving, is elevated into an angle of fifty or sixty degrees with its bowl, which is about three inches wide, by about five in length; a size which, in civilised life, would be inadmissible.

The only implement of husbandry is the hoe; if they have not an iron one, they substitute the scapula of a bison, attached to a stick in such a manner as to present the same form. The traders supply them with axes of iron.

The weapons used in hunting are bows and arrows, and guns. The bow is about four feet long, of a simple form, composed of hickory, or hop-horn beam wood, (*ostrea virginica*), or bow-wood,² (*maclura aurantiaca* of Nuttall,) the latter being greatly preferred. The cord is of twisted bison, or elk sinew. The hunting arrow is generally made of arrow-wood, (*viburnum*), about two feet in length, of the usual cylindric form, and armed with elongate-triangular spear-head, made of sheet iron, of which the shoulders are rounded, instead of the ordinary barbed form; it is firmly affixed to the shank by deer sinew, and its flight is equalised by three half webs of the feathers of a turkey, neatly secured near its base, in the usual manner. The war arrow differs from that used for hunting, in having a barbed spear-head, very slightly attached to the wood, so that if it penetrate the body of an enemy, it cannot be withdrawn without leaving the point in the wound.

The arrows are contained in a quiver, which is slung obliquely across the back, and which is generally made of Cougar skin, with the tail of the [12] animal dangling down from the upper extremity; attached to this quiver is also a skin case for the bow, when not in use. To bend

the bow requires the exertion of considerable force, dexterously applied; for this purpose three fingers are placed upon the string, whilst the thumb and index finger grasp the base of the arrow, where it rests on the string; the wrist is defended from the percussion of the string by a guard of leather. The smooth bored gun is preferred to the rifle, the latter being too heavy for their use. Those called Mackinaw guns are greatly preferred to those which they more commonly procure from our traders, being far more substantial and serviceable.

They make use of no traps, excepting those for catching beaver, which they obtain from the traders chiefly on loan. The hooks which they use in fishing are bought of the traders. They have no fishing nets.

We saw no other domestic animals in the Indian villages than horses, mules, asses, and dogs. The first are by no means elegantly formed, but they are hardy and serviceable. The Indians are generally cruel horse masters, perhaps in a great measure through necessity; the backs of their horses are very often sore and ulcerated, from the friction of the rude saddle, which is fashioned after the Spanish manner, being elevated at the pummel and croup, and resting on skin saddle cloths without padding. They ride extremely well, and make great use of the whip and the heel. The former is attached to the wrist by a broad band, which passes through a hole perforated near the end of the handle. The handle is about fifteen inches long only, and very stout; that of the whip of Hashea, the Oto warrior, is the section of a gun-barrel. The lash is composed of two thongs of bison skin, from one-fourth to half an inch wide. These are alternately passed through small longitudinal slits cut in each, and, when [13] finished, exhibit, on a cursory

view, the appearance of a flat plait, thick, and longer than the handle.

The dogs of the Konzas are generally of a mixed breed, between our dogs with pendant ears, and the native dogs, whose ears are universally erect; the Indians of this nation seek every opportunity to cross the breed. These mongrel dogs are less common with the Omawhaws; while the dogs of the Pawnees generally have preserved their original form.

No regular sentinels are appointed to watch during the night; but many of the young men, who are moving about the greater part of the night on their errands of love, often singing and hallooing to excite the attention of their mistresses, are the only guards of the safety of the village from surprise. If, however, the nation have reason to believe that the enemy is near at hand, or that there is a probability of an attack, they are necessarily vigilant; young warriors volunteer to look out at different points, or are requested to do so by the chiefs.

Wars generally originate in the stealing of horses, and the elopement of squaws; they are sometimes the consequence of infringing on each other's hunting grounds. Hostilities are generally conducted by small predatory parties, which are originated and formed under the influence of some approved warrior. An individual of this description, having determined to endeavour to assemble a war party, as a first step, paints himself over with white clay; he then passes through the camp or village, crying aloud to the Wahconda, and requesting the young warriors of the nation to have pity on him, and accompany him to strike at the enemy; he then ascends some hill or elevation, or repairs to the woods, and there continues for some time his ejaculations. The

following day he gives a feast to all such as are willing to accompany him; and it is distinctly understood, that all of those who partake of his hospitality on this occasion are enlisted for the [14] excursion. He occasionally repeats this crying and feasting, until a convenient period can be assigned for their departure. During this interval he also occupies himself in *making medicine*, hanging out his medicine bags, &c. At his feasts he harangues his men, telling them that they must endeavour to make themselves known to the nation by their warlike deeds.

This leader the French distinguish by the name of *partizan*, and the Omawhaws *No-doh-hun-guh*; his medicine parcel, upon which much reliance is placed, for the successful termination of their adventure, contains, almost always, the skin of a sparrow hawk (*Falco sparverius*), and many small articles, such as wampum, beads, and tobacco, all attached to a belt, but carefully and neatly enveloped in bark, and tied around by strips of the same material, forming a cylindrical figure, of about twelve inches in length.

This is suspended upon the back or shoulders of the partizan, by its belt, which passes round his neck.

Having their mockasins, leggings, guns, bows and arrows, spears, war clubs, and scalping knives prepared, each man furnishes himself with some provisions, and they all depart silently during the night, led by the partizan.

On their route towards the enemy they proceed with great caution, and constantly send forward runners, or spies, to reconnoitre. When encamped, some individuals are vigilant during the night, but if they suppose themselves to be distant from the enemy, they keep no watch.

The medicine bag is not permitted to touch the ground;

accordingly on encamping, it is carefully suspended to a forked stick, which is stuck firmly in the soil; the ceremony of smoking to it, is then performed, the stem of the pipe being occasionally directed towards it, the heavens and the earth. After this ceremony, if the party is in the vicinity of the [15] enemy, the partizan places the medicine bag about the neck of one of his trusty warriors, and, whispering in his ear, directs him to take two or three men, and look carefully about for signs of the enemy.

On the return of this messenger the partizan runs to meet him, receives his report in a whisper, takes the important charge from his neck, and whilst returning it to its place, communicates the intelligence he has received to his party; "no sign of the enemy has yet been discovered, but have patience, my brave young men, the Wahconda will soon have pity on us, and show us the enemy we so anxiously seek." If, on the contrary, the enemy is discovered, his position and numbers are reconnoitred, and the party prepares to attack them. The sacred medicine bag is now opened by the partizan; the envelop is rejected, and the remainder is suspended from his neck, with the bird skin, wampum, &c. hanging down before from the belt. This is a signal, indicating that a blow must be struck. The party then paint themselves, and smoke if time admits of it. The partizan at length gives the wished for order, and the whole move onward, with slow and cautious steps, in order to surprise the enemy; but if discovered, they rush on with [impetuosity, and without any regular order. If the scene of the contest lies in the forest, they shield themselves behind trees of small diameter, when at the proper distance, from whence they discharge their missiles. If the attack is made in the open plain, where no shelter offers, they leap

about from one side to another, and preserve a constant state of activity, for the purpose of preventing any steady aim from being taken at them by their adversaries.

It is not the mere shooting down of an enemy that confers great honour upon a warrior; this, the Indians say, can be done by any person, however cowardly he may be. But high distinction is due to the gallant soul, that advances upon the field of [16] battle, and captures an enemy, or who first strikes, or even touches the body of a fallen enemy, in presence of the friends of the deceased, who are generally watching their opportunity to revenge his death.

This is, indeed, an extraordinary proof of courage, as the act is not to be accomplished without the greatest hazard of life; the adventurer is obliged to expose himself, often, to a great number of assailants, besides the danger of falling into an ambush, in attempting to strike the decoy. It is this *striking*, that is numbered amongst their war feats by the warriors, at their dances.

The capture of a prisoner confers the highest honour on the captor. Striking an enemy, whilst active, appears to be the second in rank, of their great martial achievements. Striking his dead, or disabled body, confers the third honour. Capturing a horse may be regarded as the fourth; presenting a horse to any person, the fifth, and the shooting, or otherwise killing an enemy, by a missile, is the sixth in point of rank of military deeds, in the estimation of the Omawhaws. The taking of a scalp is merely an evidence of what has been done, and, of itself, seems to confer no honour.

The prisoners are well guarded, and not roughly treated, unless a strong party of the enemy are in pursuit, when they are put to death.

On the battle ground, the wounded of the vanquished are killed, and their dead are cut and hacked by the victors; but if it should chance to be accessible to the squaws, they perform the chief part in this tragedy. They sever the limbs from the bodies, and attaching them to strings, drag them about with vociferous exultation: *etiam genitalia excidunt*, and tying them about the necks of their dogs, they drive them before them, with much shouting, laughter, noise, and obscene expressions.

[17] A war party, after having struck a blow upon the enemy, return with rapidity towards their village.

They leave the mutilated carcasses of the slain upon the contested field, a prey to the wolves and vultures. Their own dead are covered with wood or stones, and their wounded are transported on litters, on the shoulders of others, or if they have horses with them, upon cars of a very simple construction. Two poles are attached to the neck of the horse, in the manner of shafts, which trail upon the ground behind. These are so connected behind the horse, with cross pieces lashed on, that a bison robe can be suspended to them, for the reception of the wounded person.

If the attack is made during the night, or if the party has only captured horses unobserved by the enemy, a mockasin or arrow is left in a conspicuous situation, to inform the enemy of the nation to which the aggressors belong.

Large war parties sometimes divide into smaller parties, in order to attack simultaneously at different points. Each of these parties on its return, at its different encampments, inserts small painted sticks in the soil, pointing to the route they have taken. They also peel

off a portion of the bark from a tree, and on the trunk thus denuded and rendered conspicuous, they delineate hieroglyphics with vermillion or charcoal, indicative of the success or misfortune of the party in their proceedings against the enemy. These hieroglyphics are rudely drawn, but are sufficiently significant, to convey the requisite intelligence to another division of the party that may succeed them. On this rude chart, the combatants are generally represented by small straight lines, each surmounted by a head-like termination, and are readily distinguishable from each other; the arms and legs are also represented, when necessary to record the performance of some particular act, or to exhibit a wound. Wounds are indicated by the representation of the [18] dropping of blood from the part; an arrow wound, by adding a line for the arrow, from which the Indian is able, to estimate with some accuracy, its direction, and the depth to which it entered. The killed are represented by prostrate lines; equestrians are also particularized, and if wounded or killed, they are seen to spout blood, or to be in the act of falling from their horses. Prisoners are denoted by their being led, and the number of captured horses is made known by the number of lunules, representing their track. The number of guns taken may be ascertained by bent lines, on the angle of which is something like the prominences of the lock. Women are portrayed with short petticoats and prominent breasts, and unmarried females by the short queues at the ears, before described.

A war party, on its return, generally halts upon some elevated ground within sight of the village; and if they have been successful, they sit down and smoke their pipes. The villagers on discovering them rush out to

meet them, and receive a brief relation of the events that have occurred during the expedition.

All then return to the village, exhibiting by the way the greatest demonstrations of joy, by discharging their guns, singing war-songs, &c. The scalps stretched upon hoops, and dried, are carried upon rods of five or six feet in length.

Arrived at the village, some of the squaws, wives to the warriors of the party, assume the dress of their husbands, and, with the rods bearing the scalps in their hands, dance around a large post, reddened with vermillion, and, in concert with the young warriors, sing the war and scalp songs; the young warriors occasionally step into the ring of the dancers, and all keep time, with dance and song, to the loud beat of the gong. Into this dance are also admitted the relatives of the war party.

This barbarous dance appears to delight them, [19] and particularly the squaws, who are the principal actors, more than almost any other of their enjoyments.

Indeed, it is to the squaws that many of these excursions are attributable, as those whose husbands have not been successful in war, frequently murmur, saying, "You have had me for a wife a long time, and have never yet gratified me with the scalp dance."

Those squaws, whose husbands or relatives have been killed during the excursions of the party, take no part in this blissful dance, but rub themselves with clay, and lament.

This dance is repeated every night for two or three weeks, after which it is renewed occasionally for a twelve-month. The scalps are often cut into slips, that many of the dancers may be accommodated with them; but this was never done with an intention to deceive, respecting

the actual number of the enemy killed. After the termination of this ceremony, the scalps are either thrown away, or are used to decorate the leggings of the warrior, or to suspend from his medicine-bag, or from the bridle of his horse.

Soon after the return of the party, the principal warriors are invited to feasts by different villagers, where they recount the events that have transpired during their absence. They narrate the mode of approaching the enemy, the onset, the battle, all the little particulars of which are detailed: but they seem to dwell with particular pleasure on the conduct of individuals of the enemy, as it appeared immediately before they received the death blow; if there was any movement of the body, or emotion exhibited upon the countenance of the victim, that betrayed a want of firmness, or fear of death, at that awful juncture, the account excites much laughter in the audience. If the disabled individual was so imbecile as to shrink from a blow of the tomahawk [20] or war-club, he is ridiculed as a coward. If he is said to have cried for quarter, or begged for mercy, or to have held up the palm of his hand towards the victor to appease his vengeance, the account is received with ridicule and laughter, at the expense of the deceased. If, on the contrary, he is said to have perished with that stoicism and contempt of death, which is regarded as worthy of the Indian warrior, the auditors, although they may smile with pleasure at the death of an enemy, yet pay due honour to his manes, saying he was a brave fellow; and they do not fail to applaud the bravery of his victor also.

All those of the party who have first struck a body, or taken a prisoner, paint themselves black, and if any strangers are in the village, they put on their *crow*, and

appear before them, or near them, and sing their war-song in which their exploits are detailed.

The prisoners are differently treated according to their sex, age, and qualifications. Of the squaws they make slaves, or rather servants, though these are sometimes advantageously married. To the young men the task of tending horses is commonly assigned; but the children are generally adopted into their families, and are treated in every respect as their own offspring; when arrived at maturity they are identified with the nation, and it would be an insult to apply the name of their own countrymen to them.

[21] CHAPTER IV [II]

War — Negotiation for Peace — Revenge — Self-esteem
— Hospitality — Mimicry.

AN individual warrior not unfrequently goes to war unaccompanied; but parties are generally made up for this purpose, in the manner before mentioned. In cases of extraordinary provocation, the whole nation of warriors marches in a body to attack the enemy, under the direction of the principal chief.

More than twenty years ago, the Omawhaws marched against the Pawnee Mahas or Pawnee Loups. They encountered them on their hunting grounds, between the Platte and Quicourre²¹ rivers, in the prairie, where they attacked them, killed sixty, and wounded a great many; after securing a number of prisoners, and many horses,

²¹ Now more commonly known by its Indian name of Niobrara, which signifies the same as L'Eau qui Court (Running Water or Rapid River), of which Quicourre is a corruption. The entire course of this river lies in Nebraska, just below its northern boundary.— Ed.

they returned with their booty, having lost but fifteen warriors. Peace was soon after concluded between the two nations, which has not been since violated, excepting on one occasion, when their dispute was bloodless, and of but short duration.

Sometime after this event, Mot-tschu-jinga, or the Little Grizzly Bear, a brave and distinguished warrior of the nation, with two or three attendants, visited the village of the Pawnee republicans, in order to perform the calumet dance before the people. This was a band with whom they were barely at peace. The republicans seized him, flogged him, cut off his hair, broke his pipe, forced him to drink urine mixed with bison gall, and drove him from the village without food. These extraordinary and most humiliating indignities aroused within him the fiercest spirit of vengeance. He returned, and related his misfortune [22] to his people, who, penetrated with indignation, promptly assembled in arms, and led by the great Washingguhsahba, or Black Bird, marched to revenge such unheard-of indignity. When within a short distance of the devoted village, they placed their squaws in a secure situation, under a proper guard, and proceeded to the attack. They urged the contest so fiercely that the enemy was driven from lodge to lodge, until four lodges only were left to them, in which they succeeded in defending themselves; the town, with the exception only of the four lodges, was then burned to the ground, and the victors retired after destroying nearly one hundred of the enemy, and wounding a great number, with the loss to themselves of only fifteen warriors.

Under the same great leader, the nation, on another occasion, attacked the Puncaws; this act was induced by the practice of the latter of stealing squaws and horses

from the Omawhaws. The Puncaws, for the purpose of defending themselves against the fire of the enemy, threw up an earthen embankment; but finding, notwithstanding the protection it afforded them, that their numbers rapidly diminished under the galling fire opposed to them, they determined to sue for peace; for this purpose two pipe-bearers were sent out successively towards the enemy, but they were both shot down. A chief then dressed up his handsome daughter, and sent her forth with a pipe to the Omawhaws. This mission was respected, the stern victors were vanquished by beauty, the proffered pipe was accepted, and unhesitatingly smoked, and a peace was concluded, which has not since been infracted by the Omawhaws. Soon after the death of Washingguhsahba, his successor Mushchinga, the Big Rabbit, led the nation against the Otoes, whom they attacked in their village. It was the intention of the assailants to burn the village, and exterminate the nation. With this view they provided themselves with dry grass, which was twisted into the form of thick ropes, [23] and secured to their girdles. When within the proper distance they despatched a detachment to take ambush on the opposite side of the village, then kindled a fire, at which they lighted the grass torches, and rushing into the village, succeeded in setting many of the lodges on fire, by fixing the torches to them. Such was the fury of the unexpected attack, that the Oto warriors were driven from the village, but falling into the ambuscade, they fought their way back to their lodges with much slaughter. A heavy fall of rain now commenced, which rescued the remaining Otoes from entire destruction. The conflagration was quickly extinguished, the guns and bow-strings of the invaders became useless, and the

Otoes sallying out with fresh weapons, forced them to a precipitate retreat. The loss was severe on both sides, but the Omawhaws succeeded in carrying off almost all the horses of the enemy, besides a number of prisoners, furniture, &c. The war continued between these two nations until the pacification which was accomplished through the agency of Lewis and Clark, and has continued to the present day.

Reverting to the period of the government of Washingguhsahba, we are informed that the Padoucas once approached the nation, and stole a number of horses, when this chief assembled his warriors, and pursued them; observing the tracks of their feet in the soft earth, he discharged his gun repeatedly into them, declaring that thereby he would cripple the fugitives so entirely, that it would be easy to overtake and destroy them. Accordingly he did overtake them, and, agreeably to the Indian account, they were unable to defend themselves, and were all destroyed but two or three, who escaped, and failed not to inform their people of the wonderful medicine of the victor.

The last martial expedition of Washingguhsahba, terminated disastrously for his nation. He led his warriors against the Konzas, halted them near the [24] village of that people, and singly rode round the village, repeatedly discharging his gun at the inhabitants, as he passed swiftly by them. As soon as the Konza warriors were collected, they sallied out in pursuit of the Black Bird, who had now joined his party. The parties closed, and intermingled in fight, and the contest was obstinate and protracted. An Omawhaw pierced the thigh of a Konza with an arrow; the latter called aloud to inquire the name of his adversary, and was answered, No-zun-doj-je

(he who does not dodge). "My name," said the Konza, "is —— (he who kills brave men), so come on, we are happily met." They approached each other, leaping laterally and capering, the Omawhaw discharging his arrows, and the Konza endeavouring to get aim with his fusee; the latter at length succeeded, and shot his opponent.

The conflict at length became too warm for the Omawhaws, who retreated eight miles, disputing the ground, however, the whole distance. They now arrived at the prairie, on which we encamped on the evening of the 24th of August last.

Here the Omawhaws again made a stand, and fought the principal battle, but were overpowered, and obliged to fly, leaving their numerous killed and wounded to the vengeance of the enemy.

These two nations still continue hostile to each other.

It is said that during the youth of Washingguhsahba, he was taken prisoner by the Sioux. That the town of the Omawhaws, was then on the opposite bank of the Missouri, at the mouth of the stream called by Lewis and Clark, Floyd's river,²⁵ and that the nation had not, at that time, been long resident there.

Some time previous to the variolous mortality in the Omawhaw nation, several bands of Sioux, in conjunction with the Shienne nation,²⁶ attacked them on their return from a summer hunt, and overpowered them by numbers.

[25] A few years since, the Pawnees made a general attack upon the Konza village. They were all mounted

²⁵ Sergeant Floyd, of the Lewis and Clark expedition, died here in August, 1804, whence the name of the stream, which it still bears. Its mouth is on the Iowa side, just below Sioux City.— Ed.

²⁶ On the Cheyenne, see Bradbury's *Travels*, in our volume v, note 88.— Ed.

on horseback, and rode furiously about, whilst they fired into the Konza lodges. The principal chief of the nation, Burning Heart, ran through his village, calling out to his warriors to remain quietly in their houses for the present, and not show themselves to the enemy, or return their fire, in order to give them time to tire out their horses by continued action. After a while a few shots were returned, to prevent the Pawnees from rushing into the town itself, and when the horses appeared to be sufficiently fatigued, Burning Heart despatched two strong parties from the opposite end of the village from that upon which the attack was made, one of which, moving rapidly upon their hands and knees, gained a ravine, along which they ran until they gained the enemy's rear: they were here joined by the other party, which had gained the same situation by means of a lower prairie, along the bank of which they passed unperceived. Finding themselves thus out-generaled, the Pawnees were under the necessity of charging through the enemy, and flying with jaded horses before them. So rapid was the pursuit, that the Pawnees were obliged to precipitate themselves into the ravines, over which they must pass, to the destruction of many of their horses. Finally, they made their escape, with the loss of eighty men, and the greater part of their horses.

When a hunting party is suddenly attacked by an enemy, the squaws, whilst their husbands are engaged in opposing the enemy, sedulously occupy themselves in digging basin-shaped pits with their hoes, for their personal security, and stooping down in them, escape the missiles of the contending parties; their husbands, if too hard pressed, also retreat to these cavities, from which they can continue the action with very little exposure of their own persons, whilst the enemy possesses no shelter.

[26] Besides the national battles, in which great waste of life occurs, small war parties, or such as have been already described, are almost constantly in motion, and are also destructive.

The Serpent's Head, a distinguished Oto warrior, assembled a war party of thirty men, and moved against the Konzas. Within a few miles of their village, at a narrow defile on Blue-earth Creek, he placed his party in ambush, and with two or three selected men, he advanced to within a hundred yards of the village. At the dawn of day a Konza, having occasion to walk a short distance, was attacked by the Serpent's Head singly, who buried his tomahawk in his head, and took off his scalp, within view of many of the villagers. These seized their weapons, and immediately pursued the fugitives, until they reached the pass, where, falling into the ambushade prepared for their reception, they lost seven of their number, and were obliged to retreat precipitately, to seek the protection of the main body of their warriors, who, they supposed, were now in pursuit, and at no great distance in the rear.

The Otoes, after striking and scalping the slain, proceeded on their way home, at a very moderate pace, not caring to elude the powerful force, which they well knew must be hard by. The Konza warriors, dashing on at full speed, at length discovered the retreating band, moving at their leisure over a prairie, and immediately attacked them. The Otoes withstood the shock of the overwhelming force for some time, until, losing a number of their party, they were under the necessity of seeking safety in flight.

An Oto hunting party, consisting of five lodges, was encamped in the vicinity of the Konza hunting grounds; two or three of their number, who were at a distance from their companions, encountered a young Konza warrior, who

deliberately approached [27] them, and when sufficiently near discharged his gun at them, but was immediately shot down.

The Otoes suspecting, from some appearances, the proximity of a large body of the enemy, precipitately returned to their party, and hastened to place themselves in an attitude of defence. They availed themselves of three large logs, which had fallen so as to form a triangular area, into which they removed their effects, and strengthened the defences in such a manner as to afford them some security.

The squaws dug cavities in the earth for themselves, and their children, as an additional security.

Scarcely were these preparations finished, when the whole body of the Konza warriors made their appearance, and commenced the attack on this little body of fifteen Otoes. These gallant fellows, thus advantageously posted, notwithstanding the fearful odds opposed to them, returned the fire of the enemy promptly, and at length succeeded in repulsing them, with the loss of two or three of their own men, and after having killed about fifteen of the Konzas.

The following trait in the character of a distinguished warrior is worthy of being recorded. During the residence of the Pawnees on the Platte at the cedar hills, about fifteen or eighteen years since, the Otoes were frequently at war with them, notwithstanding their own great numerical inferiority. On one occasion, during a pacific interval, some Otoes followed the Pawnees, who had just left their village on a national hunt, and stole two horses from them. This outrage, committed in time of peace, highly incensed Wasacaruja: "If you wish for war," said he to the offenders, as he mounted his horse, "you shall have it." He rode immediately, in his anger, to the deserted Pawnee

village, and setting fire to the lodges, burned them all to the ground.

On their return, the Pawnees, finding their village destroyed, they marched in a body to the Otoes, [28] and demanded satisfaction for the injury they had received. Wasacaruja, perhaps, penitent for his rash act, and no doubt now wishing to avert the hostilities which he had incited, advanced to them at once, saying "I am the person who burned your town, kill me if you will." This however the Pawnees declined, and were at length reconciled to their loss, by presents of horses and merchandize. They then removed from the vicinity of the Otoes, and erected their present village on the Loup fork of the Platte.

The Otoes, as well as the Konza warriors, will not, on any consideration, sit down whilst on a war excursion, until evening; they will lie down, and stoop down, but they must not rest upon the ground in a sitting posture.

An Upsaroka, or Crow, war party, who were hovering about the Rickaree village, waiting an opportunity to strike a blow, observed a boy entirely alone, and at a distance from any succour; having a boy belonging to the party much of the same size, they permitted him to attack the Rickaree boy singly; the assailant was successful, and brought off the scalp of the enemy.

One of the warriors then took the scalp, and rode with it near to the village in defiance.

During the last seven or eight years, since they have become influenced by the agents of the United States, the Omawhaws have entirely abstained from carrying the war into the country of their enemies; no unprovoked parties have been sent out, and the nation, agreeably to the injunctions of the agents, restricts its military operations solely to defensive warfare. Partial attacks have been

made upon them during this time, which have always been promptly repelled, sometimes with considerable slaughter.

That implicit confidence may be justly reposed upon, at least, some of this people, the following anecdote will testify.

[29] In the year 1815 the Ioways came to the mouth of the Platte river, and found there a trader engaged in trafficking with the Otoes. They attempted to take possession of his merchandize by force, but were opposed and repelled by the Otoes, who determined to protect their trader. The Ioways, however, threatened the trader to plunder him as soon as the Otoes should depart, whose provisions being now nearly exhausted, the fears of the trader for his safety became more excited, in proportion as the time of their departure approached. He despatched a boy with a letter to his partner, Mr. Lisa, then trading at Council Bluff, a distance of thirty miles, informing him of his situation, and of the fact, which had but then come to his knowledge, that the Ioways had formed a small party for the purpose of visiting Council Bluff, and committing some depredations there.

On the reception of this intelligence, Mr. Lisa sent a favourite Omawhaw, Wa-co-ra, to accompany the boy with his reply.

In the meantime the Ioway party had set out, and after travelling a considerable distance, the partizan became lame, and was left with a companion on the way.

Wacora, fortunately, did not meet the party, but he saw the partizan with his companion, calmly seated in fancied security, amongst the thick bushes. He crept silently near to them, who were distinctly recognized by the boy, and discharging his gun, broke the arm of the partizan's companion.

The partizan immediately perceiving the aggressor to be an Omawhaw, exclaimed, "I am a half Omawhaw; I was going to war against the Long-knives, not against the Omawhaws; shoot no more, you have wounded one of us." Wacora answered, "I am a Long-knife," upon which the wounded man made a charge with a lance, and had nearly transixed the boy, when Wacora shot him; he [30] afterwards killed the partizan, and bore off their scalps. Finding now the trail of the party, which he readily ascertained by their tracks, to consist of nine persons, he determined to return immediately with his utmost speed, even at the risk of meeting with the party, in order to inform Mr. Lisa of their presence in his vicinity; this he accomplished at the imminent hazard of his life. Thus proving that the most unlimited confidence might be safely reposed in his faithful performance of his trusts.

Warriors often venture singly into the vicinity of an enemy's village, and even into the village itself, to capture horses or kill one of the nation. The Borgne, or One Eye, Ka-ko-a-kis, late grand chief of the Minnetarees, entered the village of an enemy at night, with his robe covering his head for concealment. He passed into several lodges, until at length he found one tenanted, at the moment, only by a young squaw; he drew his knife, compelled her to submit to his desires, then stabbed her to the heart, and bore off her scalp. He was a chief possessed of much power, but was almost universally disliked as a very bad man, and was at length killed by the Red-shield chief, E-tam-ina-geh-iss-sha.²⁴

The warriors often meet together and narrate, emulously, their war exploits; two of them were one day thus engaged, one of whom, Wa-ke-da, or the Shooter, had killed more

²⁴ On Le Borgne see Bradbury's *Travels*, in our volume v, note 98.—ED.

enemies than any other individual of his nation, although he had never *struck* more than two or three bodies of the slain. They continued for some time to boast of their feats, when the father of Wakeda, an old man of seventy years, in order to terminate the altercation, leaped from his seat, and, after *striking* upon several nations, concluded by the following witticism: "I approached the Pawnee-mahaws alone, for the purpose of stealing horses. I entered their village in the evening, succeeded in getting into one of their stalls, and was proceeding to take out the horses, when I was surrounded [31] and made prisoner. They flogged me, thrust a stick into my anus, and sent me off, with the stick depending like a tail." This, as was intended, terminated the boasting, and the parties joined in general good humour.

Their notions of the attributes of bravery differ in many respects from those which we entertain of them. It is, in their estimation, no proof either of valour or good sense, for a warrior to advance into the plain, stand still, and suffer his enemy to take deliberate aim, in order to shoot him down, when such a course of conduct can be avoided; but they say that when a warrior goes to battle, it is a duty, which is due to himself, to his nation, and to his friends, to avail himself of every possible advantage over his enemy, and even to kill him, if he can, without any risk of his own person. But a warrior must never yield in battle; he must contend until death, if he cannot escape from his enemy. And if entirely surrounded, he rushes amongst them, and endeavours to destroy or injure as many as possible, and in death he exhibits traits of passive courage, which form no part of the character of civilized men.

The succeeding narrative may serve, better than any general remarks, to convey an idea of the formalities at-

tendant on a negociation for peace, amongst the Missouri Indians.

During the stay of our detached party at the Konza village, several chief men of the nation requested Mr. Dougherty to lead a pacific deputation from their nation, to their enemies the Otoes, Missouries, and Ioways, then dwelling in one village on the Platte. Circumstances then prevented the gratification of their wishes, but he gave them to understand, that if the deputation would meet our party near Council Bluff, he would probably then be authorized to bear them company; on which they determined to send a party thither. Accordingly, on [32] the day preceding the arrival of our steam-boat at the position chosen for our winter cantonment, a deputation from the Konzas arrived for that purpose. It consisted of six men, led by He-roch-che, or the Real War Eagle, one of the principal warriors of the Konza nation.

Mr. Dougherty having made their pacific mission known to Major O'Fallon, the latter expressed to them his cordial approbation of their intentions, and the following day he despatched Mr. Dougherty with them, to protect them by his presence, on their approach to the enemy, and to assist them by his mediation, in their negociations, should it be found necessary.

They had not proceeded far on the way, when one of the Indians inquired if the Sioux war parties were often in the neighbourhood. Mr. Dougherty informed them that they were; that they had killed an Oto some time since, and more recently, four Omawhaw squaws. This intelligence induced Herochshe to request the loan of Mr. Dougherty's gun; they all looked sharply about them, and requested their guide to take the lead.

The distance to the Oto village is about twenty-five

miles; on the journey over the prairies, they espied an object at a distance, which was mistaken for a man, standing upon an eminence. The Indians immediately halted, when Herochshe addressed them, with the assurance that they must put their trust in the Master of life, and in their leader; and observed, that, having journeyed thus far on their business, they must not return until their purpose was accomplished; that if it was their lot to die, no event could save them; "We have set out my braves,"²⁸ said he, "to eat of the Otoes' victuals, and we must do so or die;" the party then proceeded [33] onward. The Indians are always very cautious when approaching an enemy's village, on any occasion, and this party well knew that their enterprize was full of danger.

In a short time they were again brought to a halt, by the appearance of a considerable number of men and horses, that were advancing towards them. After some consultation and reconnoitring, they sat down upon the ground, and lighting the peace-pipe, or calumet, Herochshe directed the stem of it towards the objects of their suspicion, saying, "smoke friend or foe;" he then directed it towards the Oto village, towards the white people, towards heaven, and the earth, successively.

The strangers, however, proved to be drovers, with cattle for the troops, on their way to Council Bluff.

In consequence of being thus detained, it was late in the afternoon when the party arrived at the Platte river, and as they had still eight miles to travel, and it was indispensable to their safety that they should reach the village before dark, Mr. Dougherty urged his horse rapidly forwards.

²⁸ When on a war excursion, or a pacific mission, the Indians always address their companions in this manner: "My companion, my brave. My brother, my brave."— JAMES.

The Indians, who were all on foot, ran the whole distance, halting but twice, in order to cross the Elk Horn and Platte rivers, although one of them was upwards of sixty years of age, and three of the others were much advanced in years.

As they drew near the Oto village, they were discovered by some boys, who were collecting their horses together for the night, and who, in a telegraphic manner, communicated intelligence of their approach, to the people of the village, by throwing their robes into the air.

The party was soon surrounded by the inhabitants, who rushed towards them, riding and running with the greatest impetuosity. The greatest confusion reigned for some time, the Otoes shouting, hallooing, and screaming, whilst their Konza visitors lamented aloud. Shaumon-ekusse soon arrived, and restored a [34] degree of order, when, the business of the mission being made known in a few words, the Konzas were taken up behind some of the horsemen, and conveyed as rapidly as possible to the lodge of Shongotongo, lest personal violence should be offered them on the way. They did not, however, escape the audible maledictions of the squaws as they passed, but were stigmatized as wrinkled-faced old men, with hairy chins, &c., ugly faces, and flat noses.

After running this species of gauntlet, they were quietly seated in the lodge, where they were sure of protection. A squaw, however, whose husband had been recently killed by the Konzas, rushed into the lodge, with the intention of seeking vengeance by killing one of the ambassadors on the spot. She stood suddenly before Herochshe, and seemed a very demon of fury. She caught his eye, and at the instant, with all her strength, she aimed a blow at his breast with a large knife, which was firmly grasped in her right hand, and which she seemed confident of sheathing in his

heart. At that truly hopeless moment, the countenance of the warrior remained unchanged, and even exhibited no emotion whatever; and when the knife approached its destination, with the swiftness of lightning, his eyes stood firm, nor were its lids seen to quiver; so far from recoiling, or raising his arm to avert the blow, that he even rather protruded his breast, to meet that death which seemed inevitable, and which was only averted by the sudden interposition of the arm of one of her nation, that received the weapon to its very bone.

Thus foiled in her attempt, the squaw was gently led out of the lodge, and no one offered her violence, or even harsh reproof. No further notice was taken of this transaction by either party.

Food was then, as usual, placed before the strangers, and soon after a warrior entered with a pipe, which he held whilst Herochshe smoked, saying in a loud voice, "you tell us that you wish for peace, I say, I [35] will give you a horse, let us see which will be the liar, you or I." The horse was presented to him.

The evening, and much of the night was passed in friendly conversation respecting the events of the five years' war which they had waged with each other.

On the following morning the Konzas were called to partake of the hospitality of different lodges, whilst the principal men of the village were assembled in council, to deliberate upon the subject of concluding a peace.

At noon the joint and grand council was held in the Crenier's lodge. The Otoes, Missouries, and Ioways took their seats around the apartment, with the Konzas in the centre. Herochshe, whose business it was first to speak, holding the bowl of the calumet in his hand, remained immovable for the space of three-fourths of an hour, when

he arose, pointed the stem of the calumet towards each of the three nations successively, then towards heaven, and the earth, after which he stretched out his arm, with the palm of the hand towards the members of the council, moving round with his body so as to present the palm towards each of the members in succession. He then proceeded to shake each individual by the hand, after which he returned to his place, and renewed the motion of the hand as before.

Having performed all these introductory formalities, he stood firm and erect, though perfectly easy and unconstrained, and with a bold expression of countenance, loud voice, and emphatical gesticulation, he thus addressed the council.

"Fathers, brothers, chiefs, warriors, and brave men. You are all great men. I am a poor obscure individual. It has, however, become my duty to inform you, that the chiefs and warriors of my nation, sometime ago, held a council for the purpose of concerting measures, to terminate amicably, the cruel and unwelcome war, that has so long existed between us, and chose me, all insignificant as I am, to [36] bring to you this pipe which I hold in my hand. I have visited your village, that we might all smoke from the same pipe, and eat from the same bowl, with the same spoon, in token of our future union in friendship.

"On approaching your village, my friends and relatives, I thought I had not long to live. I expected that you would kill me, and these poor men who have followed me. But I received encouragement from the reflection, that if it should be my fate to die to-day, I would not have to die to-morrow, and I relied firmly upon the Master of life.

"Nor was this anticipation of death unwarranted by precedent. You may recollect that five winters ago, six

warriors of my nation came to you, as I have now done, and that you killed them all, but one, who had the good fortune to escape. This circumstance was vivid in my memory when I yesterday viewed your village in the distance; said I, those warriors who preceded me in the attempt to accomplish this desirable object, although they were greater and more brave than I, yet were they killed by those whom they came to conciliate, and why shall not I share their fate; if so, my bones will bleach near theirs. If, on the contrary, I should escape death, I will visit the bones of my friends. The oldest of my followers here, was father-in-law to the chief of those slaughtered messengers; he is poor and infirm, and has followed me with difficulty; his relatives, also, are poor, and have been long lamenting the loss of the chief you killed. I hope you will have pity on him, and give him a pair of mockasins (meaning a horse) to return home with, for he cannot walk. Two or three others of my companions are also in want of mockasins for their journey homeward.

“My friends! we wish for peace, and we are tired of war; there is a large tract of country, intervening between us, from which, as it is so constantly [37] traversed by our respective hostile parties, we cannot either of us kill the game in security, to furnish our traders with peltries. I wish to see a large level road over that country, connecting our villages together, near which no one can conceal himself in order to kill passengers, and that our squaws may be enabled to visit from village to village in safety, and not be urged by fear, to cast off their packs, and betake themselves to the thickets, when they see any person on the route. Our nations have made peace frequently, but a peace has not hitherto been of long duration. I hope, however, that which we shall now establish will continue

one day, two days, three days, four days, five days. My friends! what I have told you is true; I was not sent here to tell you lies. That is all I have to say."

Herochshe then lit his pipe, and presented the stem to the brother of the Crenier, Wa-sac-a-ru-ja, or He who eats raw, who had formerly been his intimate friend. The latter held the end of the stem in his hand, whilst he looked Herochshe full in the face, for a considerable space of time. At length he most emphatically asked, "Is all true that you have spoken." The other, striking himself repeatedly and forcibly upon the breast, answered with a loud voice, "Yes! It is all truth that I have spoken." Wasacaruja, without any further hesitation, accepted the proffered pipe, and smoked, whilst Herochshe courteously held the bowl of it in his hand; the latter warrior then held it in succession to each member of the council, who respectively took a whiff or two, after which the pipe itself was presented to Wasacaruja to retain.

It is impossible to convey an adequate idea of the energy, and propriety, with which this speech was delivered, or of the dignity and self-possession of the speaker. Before he commenced, he hesitated and looked around upon his enemies, probably in order to trace in the lineaments of their countenances, the [38] expression of their feelings towards him. He then began his address, by raising his voice at once to its full intonation, producing a truly powerful effect upon the ear, by a contrast with the deep and long continued silence which preceded it. He was at no loss for subject or for words, but proceeded right onwards to the close of his speech, like a full-flowing, bold, and impetuous stream.

Wasacaruja, in consequence of having first accepted of the calumet, was now regarded as responsible for the sin-

cerity of his friend Herochshe. He therefore arose, and thus addressed the ambassador. "My friend! I am glad to see you on such an occasion as the present, and to hear that your voice is for peace. But I can hardly believe that we can ever rest in a permanent peace. A few winters ago, when we were in friendship with each other, I visited your village, and you gave me all your people, saying, that all the Konzas were mine. But it was not long afterwards, as we hunted near your country, that you stole our horses and killed some of our people, and I cannot but believe that the same course will be again pursued. Nevertheless, I shall again repair to the same place, of which I have spoken, this autumn, for the purpose of hunting, and in the spring I will again visit your town. You observed that you were apprehensive of being killed as you approached our village; and you most probably would have been so, coming as you did, late in the evening, and without the usual formality of sending a messenger to apprize us of your approach, had you not been accompanied by the Big-knife with whom you are so well acquainted. But we have now smoked together, and I hope that the peace thus established, may long continue. You say that you are in want of mockasins, we will endeavour to give you one or two for your journey home. That is all I have to say."

Herochshe then apologized for his uncereemonious [39] entrance into the village, by saying that he knew it to be customary, to send forward a runner on such an occasion, and he should have done so, but his friend, the Big-knife, whom he had previously consulted with that view, told him, that he had full confidence in the magnanimity of the Otoes.

Thus the ceremony was concluded, and peace restored between the two nations.

Numerous are the anecdotes already related by various authors, which go to show, that the desire of revenge for an injury or insult is remarkably permanent with the North American Indian. It would almost seem, that neither time nor circumstance can utterly eradicate it, and it is certain that it is not always extinguished with the life of the offended individual, but that it sometimes descends as an inheritance to his posterity.

A Puncaw warrior was killed in a quarrel, over the carcass of a bison, by a noted desperado of his own nation. The deceased left two sons, the elder of whom, in the course of a few years, became of sufficient age to hunt, and had the good fortune, in his first essay, to kill a fine bison. Whilst he was occupied in taking off the skin from his prey, he espied the murderer of his father approaching, who took his stand near the young hunter, and regarded him with a stern aspect. "Look up," said the intruder; the young man proceeded with his occupation. "I say, look at me;" reiterated the other, "do you know who I am? begone from this carcass, it is mine." The young hunter then raised his eyes to the countenance of him, whom he had long been taught to consider as his enemy, and fiercely retorted the dark malignant scowl which was concentrated there; then gathering his bow and arrows, he slowly retired a short distance, and turning, perceived that the warrior had already taken possession of his prize. "Yes," he exclaimed, bending his bow, "I do know you well; you are the murderer of my [40] father, and are the cause of my being an orphan." As he spoke, he discharged an arrow, which pierced the heart of his enemy, who fell dead; the victor, however, continued to feather his body with arrows, until his quiver was exhausted. He then returned to the village and related his story to the people, who re-

joiced at the death of a common disturber of the peace, and no one was found who wished to revenge his death.

Vengeance is sometimes transferred from an immediate to a remote object. The Otoes being on one occasion encamped near Mr. Lisa's trading establishment, many of their number became intoxicated with whiskey, and troublesome to the traders. But in order that the latter might not receive personal injury, two warriors were appointed by the chiefs to stand guard at the door of the house, with orders to repel all drunken individuals. Having consumed all the whiskey that had been given them, they clamorously demanded more, but the trader persisted in refusing it to them. Incensed at this denial, the grand chief Shongatonga, who was himself slightly intoxicated, went into the house, and meeting one of the traders near the door, he gave him a slight push with his hand, unobserved by Hashea, the Cut-nose, who was then on guard. The act, however, was perceived by an Indian who reclined against an outhouse, at a little distance, smoking his pipe. He advanced, apparently with perfect indifference, and taking up a keg, the only weapon which presented, he approached Shongatonga, and discharged it with all his strength, full upon the head of that chief, who was knocked down senseless by the violence of the blow.

The Little Soldier, a brother-in-law of Shongatonga, who was present at this assault, immediately seized his tomahawk, and making a threat, rushed out of the house, his silver armbands and other ornaments, with which he is usually profusely decorated, [41] sounding as he passed; he halted for an instant at the door, in order to distinguish some object on which to wreak his vengeance; espying amongst the crowd of Otoes, one from whom he had received an injury fifteen years before, which deprived him

of the sight of one eye, he pursued him, and with a blow of his tomahawk brought him to the ground; this unfortunate individual, like his victor, had also lost an eye, and in this rencontre the remaining one was destroyed.

Hashea, the guard, observing that the Indians were becoming very disorderly, drew his knife, declaring that he would kill the first individual of them he could meet with, and pursuing the canaille, they fled in every direction. During this interval an inferior Indian entered the store, and pointing with his finger near to the face of Mr. Lisa, said in a threatening tone, "You are the cause of all this disturbance;" the latter immediately kicked him out of the house; on which the Indian in a rage, declared he would revenge himself for an injury so gross. Seeking some object to destroy, he encountered a sow and pigs, and appeased his rage by putting them all to death. The Little Soldier now returned, and found that his relative had recovered. Order was at length restored by the mediation of Mr. Dougherty.

But instances are not rare, in which an Indian is unwilling to punish an injury inflicted on himself, even when retaliation is amply in his power. As the troops were ascending the river, as usual, by the aid of the cordelle, several Oto Indians were sitting on the river bank at the establishment of the Missouri fur company, quietly smoking their pipes, and apparently much interested in the movements before them. One of them was accosted by a soldier, who had left his cordelle for the purpose, with an offer to purchase the pipe he was then using; but the Indian would not part with it, saying, he had no other to bear him company in his hunting excursions. [42] The soldier requested permission to examine it, but as soon as the Indian put the pipe into his hands, he twisted the bowl

from the handle and ran off with it. The Indian in company with one of the traders, immediately pursued the thief to his boat, and demanded the pipe; but obtaining no satisfaction, he came to Engineer Cantonment, and stated the circumstance to Major O'Fallon, who assured him that his influence should not be wanting to procure the pipe again, and to have the offender punished by a very severe whipping. The Indian, however, with more mercy than justice, replied, that he would extremely regret the infliction of any punishment whatever upon the soldier, and he desired it might not be done; all he wished for was the recovery of his property.

The Omawhaws consider themselves superior, in the scale of beings, to all other animals, and appear to regard them as having been formed for their benefit. They will sometimes say, when speaking of a bad person, "he is no better than a brute." It is true that a magician tells his auditors that "a grizzly bear whispered in my ear, and gave me this medicine:" but his meaning is that the Wahconda, in the shape of that animal, had communicated with him.

Neither do they seem to suppose that the inferior animals accompany them to the other world, though they expect to pursue their occupation of hunting there.

In their opinion, the Wahconda has been more profuse in his distribution of gifts to the white people, than to the red-skins; particularly in imparting to us the knowledge of letters, whereby the result of experience is so readily transmitted from one person to another, so as to seem like the operation of some great mystic medicine.

But they claim a superiority in natural intelligence, and readily perceive that they are more [43] active, have a greater capacity for undergoing, with fortitude, the many

evils to which they are subject in every situation and season, such as exposure to great heat and cold, hunger, thirst, and pain. They appear to esteem themselves more brave, more generous and hospitable to strangers than the white people; and these beneficent virtues with them, like the mental operations of faith, hope, and charity of the Christians, mark the perfect man.

They regard the white people, as very deficient in one of these cardinal virtues. They have been told by Indians, who have visited our settlements, that on entering the lodge of a white man, they will be informed that he has eaten his dinner, he will not, at least, set any food before them, and if they remain in the house, nothing is offered them until night, and even then, probably, but a stinted portion. The meanness of such demeanour they despise.

If a white man, or any stranger, enters the habitation of an Indian, he is not asked if he has dined, or if he is hungry, but independently of the time of the day or night, the pot is put upon the fire, and if there is but a single pound of meat in the possession of the family, that pound is cooked and set before him, and even if he has but just arisen from a feast, he must taste of the food, or offence is given. History has recorded, with high commendation, the name of a dethroned Christian monarch, who shared his last loaf of bread with a suppliant stranger; and surely a similar act in the Indian, although it be influenced by education and custom, is entitled to respect and applause.

They look upon the traffic in the necessities of life, such as meat and maize, amongst the individuals of a nation, as contemptible. Such commerce they consider as a very unfavourable trait in the character of the white man; they, however, avail themselves of it in their dealings

with him, provided he wants a considerable supply of those necessities.

[44] The food which is set before a guest, is, in every respect, considered as exclusively his own; he may give it to whom he may think proper, either within or without the lodge; he may even take it with him to his own lodgings, but the including vessel, must, in either case, be returned.

Much more food is usually served up to a guest than he can possibly eat, and when he has satisfied his hunger, if he return the remainder to the host, the latter thanks him for it, as if he had received a favour.

So exemplary is their hospitality, that every stranger, even an enemy, is protected in the habitation of an Omawhaw, as far as the power and influence of the owner extends; he is immediately invited to sit down, and no questions are put to him. The master of the house is evidently ill at ease, until the food is prepared for eating, he will request his squaws to expedite it, and will even stir the fire himself. When the guest has finished his meal, the pipe is handed to him to smoke, after which the conversation begins either vocally or by signs. As soon as it is known that a stranger is in the village, he is invited to various feasts, at each of which he must reciprocate the politeness of the host, by partaking of his fare; the stranger is not unfrequently followed from lodge to lodge by several persons, who wish to secure him as a guest in their turn.

In the kindest spirit of hospitality, they are always careful to treat their guests in the manner which they suppose will be most agreeable to them. A trader was invited to a feast, and the food being prepared, a squaw who was about to serve it up, in order to clean a bowl to contain it, began to scoop it with her curved finger. Her husband

observing this usual mode of depuration, reprimanded her, saying, "I have told you that the white people do not like to see bowls cleaned in that manner, give me the vessel, and I will show you how they clean [45] them." He then drew out one corner of his breech-clout, and substituted it for a towel, wiped the bowl thoroughly, and returned it to the squaw. The trader, as in duty bound, tasted of the contents, but he would have preferred the agency of the finger of the squaw, to that of the old breech-clout of the husband.

An unknown stranger is led to the lodge of the principal chief, where the inhabitants collect to see him, and do not hesitate to gratify their curiosity, by looking steadfastly in his face. The stranger, if an Indian, appears perfectly at his ease, not seeming to notice the crowd that surrounds him, in order that he may not encounter their eyes. After he has eaten and smoked, he delivers his message, states his business, or tells the news. If he is seated in a small skin lodge, which contains but few persons, one of these will repeat his words aloud, that the crowd without may hear.

They are pleased with the society of the Canadian French, but they do not appear to respect them highly, because they permit too much familiarity, and are not forward in revenging an insult. The Spaniards, probably from the representations of the Pawnees, who war against them, are held in but little esteem. But it is readily perceivable, as well from their own deportment as from the representations of the French, that they respect the character of the Americans (citizens of the United States) above that of any other nation, because, they are pleased to say, we are the bravest of the white people. Previously to the late war between the United States and Great

Britain, the British are said to have been deemed most valorous. But, say they, the Ioways have informed us, that, at the commencement of the war, the British promised to give the Indians who took part with them in the contest, all the territory that lies westward of a great river, (the Ohio,) over which they declared they would drive [46] the Americans. Their subsequent inability to comply with this promise, together with an indistinct idea of some of the conflicts, both by land and water, on our Canadian frontier, lead them to suppose that the Americans conquered in that war, and that they are now the most powerful of the nations of the earth.

Like the ancients the Indians have no rhymes in their poetry. They imitate the sounds of the voice of various animals, and of some, with so much success, as to deceive even such persons as are familiar with the animals thus imitated. This mimicry extends to the voices of the bear, bison, deer, wolves, prairie dog, turkey, owl, &c. together with those of some smaller birds, the notes of which are simple. But in these imitations we knew of no individual, whose art enabled him to execute so great a variety of notes, and with so much melody, as we have heard from civilized performers, who have publicly exhibited their talents in this way, in our cities.

An Indian at his temporary night encampment, hearing the unexpected cry of an owl, wolf, &c., is generally suspicious of its proceeding from a human enemy, who is thus endeavouring to lull him into fancied security; such sounds being often made by war parties, on their nocturnal approach to their victims, to induce a belief that the animals around them are undisturbed.

They also imitate the motions of different animals, playfully, sometimes grotesquely, in their dances.

[47] CHAPTER V [III]

Tribes and Bands — Fabulous Legends — Wit — Ninne-gahe, or Mixed Tobacco — Dances — Otoes — Migrations — Language.

THE Omawhaw nation is divided into two principal sections or tribes, which are distinguished by the names Honga-sha-no and Ish-ta-sun-da; the latter means Grey Eyes.

The first-mentioned tribe is subdivided into eight bands, viz.

1. *Wase-ish-ta*.— This band is interdicted from eating the flesh of male deer or male elk, in consequence of having their great medicine, which is a large shell, enveloped in the prepared skin of those animals. The chief of this band is the Big Elk, Ongpatungah; and it is more powerful and numerous in individuals than either of the others.

The shell, which is regarded as an object of great sanctity and superstitious reverence, by the whole nation, has been transmitted from the ancestry of this band, and its origin is unknown. A skin lodge or temple is appropriated for its preservation, in which a person constantly resides, charged with the care of it, and appointed its guard. It is placed upon a stand, and is never suffered to touch the earth. It is concealed from the sight by several envelops, which are composed of strands of the proper skins, plaited and joined together in the form of a mat. The whole constitutes a parcel of considerable size, from which various articles are suspended, such as tobacco and roots of certain plants.

No person dares to open all the coverings of this sacred deposit, in order to expose the shell to view. [48] Tra-

dition informs them, that curiosity induced three different persons to examine the mysterious shell, who were immediately punished for their profanation, by instant and total loss of sight. The last of these offenders, whose name is Ish-ka-tappe, is still living. It was ten years since that he attempted to unveil the sacred shell, but, like his predecessors, he was visited by blindness, which still continues, and is attributed by the Indians, as well as by himself, to his committing of the forbidden act.

This shell is taken with the band to all the national hunts, and is transported by means of a hoppas on the back of a man.

Previously to undertaking a national expedition against an enemy, the sacred shell is consulted as an oracle. For this purpose, the magi of the band seat themselves around the great medicine lodge, the lower part of which is then thrown up like curtains, and the exterior envelop is carefully removed from the mysterious parcel, that the shell may receive air. A portion of the tobacco, consecrated by being long suspended to the skin mats, or coverings of the shell, is now taken and distributed to the magi, who fill their pipes with it, to smoke to the great medicine. During this ceremony, an individual occasionally inclines his head forward, and listens attentively to catch some sound which he expects to issue from the shell. At length some one imagines that he hears a sound like that of a forced expiration of air from the lungs, or like the noise made by the report of a gun at a great distance. This is considered as a favourable omen, and the nation prepare for the projected expedition with a confidence of success. But, on the contrary, should no sound be perceived, the issue of the expedition would be considered doubtful.

2. *Enk-ka-sa-ba*.— This band will not eat red maize.

They ascribe to their family the greatest antiquity, and declare that their first man emerged [49] from the water, with an ear of red maize in his hand. The principal chief is Ishkatappe.

3. *Wa-sa-ba-eta-je*; or, those who do not touch bears.— This band refrains from eating the flesh of bears.

4. *Ka-e-ta-je*, or those who do not touch turtles or tortoises.

5. *Wa-jinga-e-ta-je*, or those who do not touch any kind of bird, excepting the war-eagle.

6. *Hun-guh*.— This band does not eat white cranes, as the down of that bird is their medicine.

7. *Kon-za*.— This band must not touch the green clay, or even verdigrise, both of which are used as pigments by the other bands, for ornamenting their persons.

8. *Ta-pa-taj-je*.— This band must not touch deers' heads, neither must they wear deer-skin mockasins. Many of the individuals of this band are partially gray haired. This change of the hair, which they consider as a deformity, is attributed to a violation of the above-mentioned laws prescribed by their medicine.

The second division, or tribe *Ishtasunda*, is subdivided into five bands.

1. *Ta-pa-eta-je*.— This band does not touch bison heads.

2. *Mon-eka-goh-ha*, or the earth-makers.— Of this band was the celebrated Black Bird. They are not forbidden the use of any aliment; and are said to have originated the present mode of mourning, by rubbing the body with whitish clay.

3. *Ta-sin-da*, or the bison tail.— This band does not eat bison calves, in the first year of the age of that animal.

4. *Ing-gera-je-da*, or the red dung.— This name is

said to have originated from the circumstance of this band having formerly quarrelled, and separated themselves from the nation, until, being nearly [50] starved, they were compelled to eat the fruit of the wild cherry-tree, until their excrement became red.

5. *Wash-a-tung*.— This band must not touch any of the reptilia class of animals.

Each of these animals, or parts of animals, which the bands respectively are forbidden to touch or eat, is regarded as the particular mysterious medicine of the band collectively, to which it relates.

This singular, and, to us, absurd law, of interdiction, is generally rigidly observed; and a violation of it, they firmly believe, will be followed by some signal judgment, such as blindness, gray hairs, or general misfortune. Even should the forbidden food be eaten inadvertently, or but tasted through ignorance, sickness they believe would be the inevitable consequence, not only to the unfortunate individual himself, but involving his wife and children also.

The name of one of the bands of the Puncaw nation is *Wa-jaja*, corresponding to the name which the Osages acknowledge, which is *Waw-sash-e*.

We have before observed, that they take great pleasure in relating and hearing the narration of fabulous legends. The following specimen will serve to exemplify their taste in this way.

A bison bull, an ant, and a tortoise, agreed to undertake a joint war excursion, against the village of a neighbouring nation. As the latter associate was a slow walker, it was mutually decided in council, that he should set out on the journey immediately, to be followed in a short time by his more active companions. The tortoise

accordingly departed alone, making his way through the grass, with as much rapidity as possible. After a proper interval had elapsed, the bull also set out; and lest he should lose his fellow traveller, he consented to take him on his back. On their way the two champions were obliged to cross a miry place, in the midst of which they overtook the tortoise, struggling onward with [51] the utmost labour, and apparently almost exhausted. They did not fail, as they passed gaily by the sluggish reptile, to express their surprise at his unusually tardy movements, and at the circumstance of his being apparently almost subdued by the first obstacle that presented itself. The tortoise, however, not at all discouraged, requested them to continue their journey, and expressed his confident expectation of being able to extricate himself from the mire, without the aid which they did not seem forward in offering to him. The two companions arrived at the village of the enemy, and were so incautious in their approaches to it, as to be discovered by the inhabitants, who sallied out upon them, and succeeded in wounding them both. The tortoise at length reached the village, and was also discovered, but had the additional misfortune of being taken prisoner.

To punish him for his presumption, the enemy resolved to put him to death in such a manner as would be most painful to him. They accordingly threatened him successively with a number of different forms of torture, such as baking in hot embers, boiling, &c., with each of which the captive artfully expressed his entire satisfaction. They finally proposed to drown him; and this mode of punishment being so earnestly protested against by the tortoise, they determined to carry it into immediate execution.

With this view, several of the enemy carried him out into a deep part of the river, and threw him in.

The tortoise, thus released, and, through the ignorance of the captors in the art of torturing, abandoned to an element in which he could act freely and with much power, dived down from their view, and rising again, dragged two or three of them under water successively, and scalped them. Then rising above the surface of the water, he exhibited the scalps triumphantly to the enemy, who stood in [52] crowds upon the bank of the river, unable to injure him. Content with his fortunate achievement, the tortoise now journeyed homeward; and on arriving at his lodge, he found there the bull and ant, both in bed, groaning piteously with their wounds.

Upon the reality of such stories, many of the auditors seem to rely with implicit faith, particularly as their occurrence is referred to the chronology of former times, by such a prefatory notice as "once upon a time." The narrator proceeds with a degree of gravity of feature suitable to the nature of the events of his story; and notes a variety of little circumstances in detail, which contribute much to give the whole an air of truth to his auditors, who listen with an undivided attention, uttering occasionally an interjection, as their feelings are excited.

That the inferior animals did, in ancient times, march to battle with simultaneous regularity, that they conversed intelligibly, and performed all the different actions of men, many of them appear to admit, with as much faith as many equally absurd doctrines are believed in Christendom. But these qualities are supposed to be no longer inherent; and if an animal should now speak with the voice of man, it is either the effect of the immediate inspir-

ation of the Wahconda, or the apparent animal is no other than the Wahconda himself incarnate.

The Indians sometimes indulge in pleasantry in their conversation; and Shaumonekusse seemed to be eminently witty — a quality strongly indicated by his well-marked features of countenance. Their wit, however, is generally obscene, particularly when in conversation with the squaws.

Washingguhsahba, conversing familiarly with a Frenchman, who had long resided in the Omawhaw village, observed that the white people, being in the habit of reading books with the desire of acquiring knowledge, probably knew the cause of the difference of colour which exists between themselves and [53] the Indian; he therefore requested information from the Frenchman on this subject. The latter, assuming an air of great gravity, assured him that the cause was very well known, and was no other than that the Indian was formed of red horse-dung. The chief, with every appearance of candour, which, however, he did not feel, instantly placed his hand on the arm of his companion, and replied that this observation was a convincing proof of the great knowledge of the white people, and that they were perfectly familiar with the early operations of the Master of Life. He had no doubt, he said, that they were equally well informed as to the matter out of which they were themselves formed; but if he, a poor ignorant Indian, with no knowledge but his own, might venture to give his opinion, he would say, that they were formed of the excrement of the dog, baked white in the prairie.

They sometimes employ an indirect method of communicating information, and of explaining some particular acts of their own, which may have been erroneously construed by others.

Several Omawhaws, accompanied by a Frenchman, one day passed our cantonment, on their way to the trading house, with a considerable quantity of jerked meat. On their return they visited us; when one of them, who amused himself by turning over the leaves of a book in search of pictures, being asked by a squaw, in a jocular manner, what the book said, replied, "It tells me, that when we were taking our meat to the trading house, we wished to present some of it to white people on the way, but that the Frenchman would not permit us to do so." This remark explained the reason of their having offered us no meat.

An Indian, observing that one of our men, when cutting wood, uttered the interjection *hah!* at each blow with the axe, smiled; and asked if it assisted him, or added force to the blow.

[54] The Kinnecanick, or, as the Omawhaws call it, *Ninnegahe*, mixed or made tobacco, which they use for smoking in their pipes, is composed partly of tobacco, and partly of the leaves of the sumack (*rhus glabrum*); but many prefer to the latter ingredient, the inner bark of the red willow (*cornus sericea*); and when neither of the two latter can be obtained, the inner bark of the arrow wood (*viburnum*) is substituted for them. These two ingredients are well dried over the fire, and comminuted together by friction between the hands.

Their pipes are neatly made of the red indurated clay, which they procure from the red pipestone branch of the Sioux river.²⁰ The mass is readily cut with a common knife.

²⁰ The pipestone quarry is in Pipestone County, Minnesota, on Pipestone Creek, a branch of the Big Sioux. See J. Long's *Voyages*, in our volume II, note 43.—ED.

They frequently eject the smoke through the nostrils, and often inhale it into the lungs, from which it is gradually ejected again as they converse, or in expiration.

An Omawhaw, after an eructation of wind from the stomach, is often heard to say, "*How-wa-ne-ta*," thank you, animal; which they explain by saying, that some animal has presented itself to the hunter. The exclamation, however, has but an obscure meaning, and may be compared as somewhat similar to the "God bless you" of the French, after the convulsion of sneezing.

They indulge much in the pleasures of dancing, and their dances are of various denominations; of which the following may be particularized.

The calumet dance, *nin-ne-ba-wa-wong*, is a very favourite dance. It is usually performed by two individuals, in honour, and in the presence, of some one of their own or of a neighbouring nation, with the expectation of receiving presents in return. A person who intends to perform this dance sends a messenger, bearing a small skin containing tobacco to fill a pipe, to the individual whom he intends to honour. If the proposed compliment should not be [55] acceptable, it is refused in the most courteous manner, with excuses based upon poverty, and with many thanks for the honour intended. If, on the contrary, the tobacco should be accepted and smoked, the act shows that the visit also will be acceptable; and a time is fixed for the performance of the ceremony. At the appointed time, the dancers, with two selected companions, repair to the place of their destination, and are invited into the lodge of the person whom they addressed. After a short time, the calumet is placed upon a forked support, which is driven into the soil in the back part of the lodge. Notice is then given to the bearer of the calumet respecting

the time when it will be convenient for the dance to take place. The bearer of the calumet is now considered as the *father*, and addresses the individual whom he is about to honour by the title of *son*, presenting him with some valuable articles; such as a gun, kettle, blankets, and clothing and ornaments for his youngest child, who is destined to represent the father, or the adopted son, at the ensuing ceremony.

At sunset the calumet is taken from the forked stick, or support, enveloped like an infant in swaddling clothes, and placed carefully in a bed, prepared for its reception; a lullaby is then sung, accompanied by the music of the rattle, for its quiet repose. On the following morning it is *awakened* by a song, with the same music, and again consigned to its forked support. The appointed day having arrived, a space of sufficient diameter, is enclosed by a skreen of skins for the dance, and a post is fixed in the earth, near the entrance to the area. Around this area the principal men of the nation seat themselves; the adopted son leads in his youthful representative; and the two dancers, decorated with paint, and entirely destitute of clothing, with the exception of the breech-cloth, commence the dance. They are each provided with a decorated calumet stem, and a rattle [56] of dried skin, or a gourd, containing pebbles, with which to keep time to the music of the gong, and to the vocal chanting of the musicians of the village. They dance in the ordinary manner of the Indians, and pass backwards and forwards between the entrance and back part of the area, endeavouring to exhibit as much agility as possible in their movements, throwing themselves into a great variety of attitudes imitative of the actions of the war eagle, preserving at the same time a constant waving motion with

the calumet in the left hand, and agitating the gourd in the right, more or less vehemently, agreeably to the music. ↓

Warriors and braves will now bring forward presents of horses, guns, &c. The bridle of the horse is attached to the post, by the donor, who receives the thanks of an old crier, stationed there to perform that duty. The music now ceases, whilst the donor *strikes the post*, and recounts his martial deeds, and boasts of the presents which he has made at different times on similar occasions. Sometimes during the ceremony, a warrior will take the gong from the performer, and strike upon it as many times as he has achieved brave and generous actions; he then sets it down, and no one must dare to touch it, but such as can strike upon it more frequently than the first; if this is done, the gong is returned to the performer.

The calumet dance sometimes continues two or three days; but each night the calumet is consigned to its repose in the bed, with the same ceremonies as those of the first night.

When all the presents have been made which the dancers have reason to expect, they depart immediately with them to their own nation or lodge.

Instead of striking the post, the donors sometimes strike lightly upon the persons of the dancers themselves.

The presents sometimes made at these dances are very considerable. Ongpatunga once danced the [57] calumet to Tarrarecawaho, the grand Pawnee chief, and received from him between eighty and ninety horses. The Pawnees are indeed distinguished both for their liberality and dexterity at this ceremony. They gave one hundred and forty horses last autumn to the Otoes, who performed this dance at their village. A party of Pawnees once danced at the Omawhaw village, and gave

so much satisfaction to many individuals of this nation, as to receive extraordinary presents from them. On this occasion, one person, in the warmth of his feelings, brought forth his child, and presented it to them, as the most precious gift in his power to bestow. The Pawnees accepted this gift; but on their departure, they returned the child to its parent, accompanied by the present of a fine horse, upon which it was mounted.

The dance of discovering the enemy.— This dance is sometimes performed in honour of strangers; at other times, chiefs are invited by the warriors, who wish to exhibit their generosity in presenting them with horses, and to detail their own warlike feats in the ceremony of striking the post. The chiefs, on this occasion, seat themselves in a circle, on the outside of which the warriors are also seated in a ring or circle, concentric with that of the chiefs.

These arrangements being completed, the music strikes up, and a warrior advances, who takes a war-club and *crow*, provided for the purpose; the latter of which he belts around his waist. He then dances with a slow, shuffling motion, around the exterior circle, exhibiting at the same time a pantomimic representation of his combats with the enemy.

By and by the music beats a quicker time, and calls for corresponding movements on the part of the dancer, until at length both cease simultaneously. The warrior then advances to the post, which he strikes with his club, and proceeds to detail one of his deeds of war. This done, the music recalls him [58] to the dance, and after a short time again ceases, that he may continue his chivalric history.

This alternate dance and recitation continues until the

tale of the warrior is told; when he resigns his crow and war-club to another, who continues the amusement in like manner. Most of the dancers present horses to the chiefs, after the performing of their respective parts; and it is generally the case, that each chief invited is rewarded with one of those animals in return for the honour of his attendance.

The bear dance, *Mot-chu-wat-che*.— This is a *medicine* dance, not distinguished by any very remarkable traits. The dancers, however, imitate the motions of the bear; and songs, in which there are many words, are sung.

The beggar dance.— This has been already described in our account of the visit of the Otoes, at our cantonment last autumn. This is probably the dance mentioned by Carver, in page 158. of his work; the performance of which, on his landing near Lake Pepin, by a party of Chippeways, was the cause of much alarm to his party.²⁷

The bison dance, *Ta-nuguh-wat-che*.— The performers in this dance are painted black, and are naked from the waist upward, with the exception of the head dress, which is composed of the skin of the head of a bison, the face of which is cut off and rejected; so adapted to the top of their head as to resemble a cap, the horns projecting forward in such a manner as to correspond with their appearance when on the head of the bison. Attached to this head dress, is a strip of the skin from the back of the bison, which hangs down behind to the buttocks, like a tail. In the evolutions of the dance, they imitate the actions of the bison.

Amongst the Minnetarees, is a ceremony called the corn dance; which, however, has but little claim to the

²⁷ For sketch of Jonathan Carver, see J. Long's *Voyages*, in our volume ii, note 5.— ED.

title of a dance. Notice being given of this ceremony, by the village criers, the squaws repair to [59] the medicine lodge, in which the magi are seated, performing their incantations, carrying with them a portion of each kind of seed which they respectively intend to plant the ensuing season; as an ear of maize, some pumpkin, water-melon, or tobacco-seed. These are attached to the end of small sticks, which are stuck in the ground, so as to form a right line in front of the magi. The squaws then strip themselves entirely of their garments, and take their seats before the spectators. The magi then throw themselves into a violent agitation, singing, leaping about, pointing to the sky, the earth, the sun, and the north star, successively. After these paroxysms have subsided, the squaws arise; and each one taking her respective sticks, holds them up with extended arms.

One of the magi being provided with a large bunch of a species of bitter herb, dips it in a vessel of water, and sprinkles copiously the seeds and persons of the squaws, with much grotesque gesticulation. This concludes the ceremony; when the seeds are supposed to be fertilized, and to be capable of communicating their fertility to any quantity of their kind.

The women then assume their clothing, and return home, being careful to deposit the fertilized seed with their stock; after which they may proceed to planting as soon as they please.

We were informed that on some particular occasion, a large enclosure was constructed in the village of the Minnetarees, which was covered with jerked meat, instead of skins. The distinguished warriors who were concerned in the ceremony about to take place, deputed

some of their party to summon a certain number of the handsomest young married squaws of the village, who immediately repaired to [60] the meat-covered lodge, with the consent of their husbands. The squaws were then disrobed in the midst of a considerable number of the bravest of the Minnetaree warriors; and after the conclusion of some ceremonies a *brave* entered, leading by the halter a very fine horse. He selected a squaw, whose beauty struck his fancy; and advancing to her, he laid the cord of the halter in her hand. She accepted the present, and immediately admitted him to her favour. Other warriors appeared in succession, leading horses, all of which were very readily disposed of in the same manner. This ceremony occurred during the day, and in the presence of the whole assembly.

In the same nation a singular night dance is, it is said, sometimes held. During this amusement an opportunity is given to the squaws to select their favourites. A squaw, as she dances, will advance to a person with whom she is captivated, either for his personal attractions, or for his renown in arms, she taps him on the shoulder, and immediately runs out of the lodge, and betakes herself to the bushes, followed by the favourite. But if it should happen, that he has a particular preference for another, from whom he expects the same favour, or if he is restrained by a vow, or is already satiated with indulgence, he politely declines her offer, by placing his hand in her bosom. On which they return to the assembly and rejoin the dance. It is worthy of remark that in the language of the Omawhaws the word *watche* applies equally to the amusement of dancing, and to sexual intercourse; but to avoid being misunderstood in speaking

of the former they sometimes add the word *gaha*, to make.²⁸

What length of time the Omawhaws have resided on the Missouri is unknown; but it seems highly probable that they were not there when Mr. Bourgmont²⁹ performed his journey to the Padoucas, in the year 1724, as he makes no mention whatever of them. It would seem, indeed, that they had separated from the great migrating nation, that we shall further notice below, on or near the Mississippi, and that they had since passed slowly across the country, or perhaps up the St. Peter's,³⁰ until they finally struck [61] the Missouri at the mouth of the Sioux river. This is rendered highly probable by the circumstance of Carver having met with them on the St. Peter's in the year 1766, associated with the Shienne and others, all of whom he represents as bands of the Naudowessie nation.³¹

The Oto nation of Indians is distinguished by the name of *Wah-toh-ta-na*. The permanent village of this nation is composed of large dirt lodges, similar to those of the Konzas and Omawhaws, and is situate on the left bank of the river Platte, or Nebraska, about forty miles above its confluence with the Missouri. Although this nation

²⁸ This paragraph, found in the Philadelphia edition, is replaced by asterisks in the London issue. — ED.

²⁹ Etienne Vényard, Sieur de Bourgmont (Bourmont, Boismont, Bournion), the builder of Fort Orleans, just below the mouth of Grand River, the first post established on the Missouri (1722 or 1723), undertook an expedition therefrom during the summer of 1724, under instructions from the government of Louisiana, for the purpose of making treaties of friendship with the tribes of the plains. For his journal, see Margry, *Découvertes et Etablissements des Français*, vi, pp. 398-448. — ED.

³⁰ St. Peter's was the former name of the Minnesota River. — ED.

³¹ See Dorsey, "Migrations of Siouan Tribes," in *American Naturalist*, xv, p. 211; also Nuttall's *Journal*, in our volume xiii, note 84. — ED.

distinguish themselves by the name of Wahtohtata, yet when questioned respecting the signification of the word, they say it ought to be pronounced Wah-toh-ta-na, or Wa-do-tan, which means those who will copulate. This singular designation which they have adopted, was applied to the nation in consequence of their chief, at the period of their separation from the Missouries on the Mississippi, having carried off a squaw from that nation. The nation is, however, only known to the white people by the name of Oto, Otto, or Othouez.

It thus appears, that their name has been adopted subsequently to the migration and partition of the great nation of which they were formerly but a band. This great nation, they say, originally resided somewhere to the northward of the great lakes; and on their emigration southwardly, after performing a considerable journey, a large band of them, called Ho-ro-ge, or Fish Eaters, from their fondness of fish, separated from the main body, and established their residence on the margin of a lake. This band is now known by the name of Winnebago.²²

During the journey of the great nation, another band separated from them on the Mississippi, and received the name of *Pa-ho-ja*, or Gray Snow, which they still retain; but are known to the white people by the name of Ioways, or Aiaouez. They have, [62] however, been distinguished by the name of *Pierced-noses*, as this was erroneously believed to be the meaning of the word *Pahoja*; and it will be confessed that the distinction is somewhat nice, when we learn that the true word for pierced nose is *pa-o-ja*.

Another band seceded from the migrating nation,

²² On the Winnebago, see J. Long's *Voyages*, in our volume ii, note 86.—ED.

and established a village at the mouth of the Missouri river; from which circumstance they received the name of *Ne-o-ta-cha* or *Ne-o-ge-he*, signifying *those who build a town at the entrance of a river*; they have been known to us only by the name of Missouries.

The Otoes also separated from the nation on the Mississippi; and pursuing their journey across the country from that river, struck the Missouri near the confluence of the Great Nemawhaw. Here the Otoes remained a considerable time for the purpose of hunting; and it seems probable, from the name of the creek, that they also reared maize, and cultivated the soil after their rude manner, as the word Nemawhaw, in their language, signifies *water of cultivation*; *ne*, water, and *maha*, planting or cultivating. From this locality the Otoes proceeded up the river to the Platte; and after hunting for some time near its confluence, they moved still further up the Missouri, and established a village on its bank, about fourteen miles below Council Bluff. In this position they remained several years, during which time a band of the Ioways took up their residence about one year, on the bank of the river nearly opposite to them, and within about thirty miles of the present site of the Omawhaw village. The Otoes subsequently removed to the river Platte, about twenty miles above their present village; but finding the latter situation to be a more eligible one, they permanently established themselves there, and have already occupied it nearly half a century.

The Ioways, after having resided in a village on [63] the lower part of the Missouri a considerable space of time, were rejoined by the band above mentioned; when they abandoned their position, and returned to the waters

of the Mississippi and erected a village on the *Moyene*,²³ where it still remains.

The Missouries in process of time abandoned their village near the mouth of the river Missouri, and gradually moving up the river, at length constructed a town on the left bank, near the entrance of Grand river. In this position they were found by the French, who built a fort on an island of the Missouri, in their immediate vicinity, about the beginning of the last century. The garrison of this fort was entirely destroyed, according to Du Pratz, soon after its commander, the enterprising Bourgmont, left it.²⁴

The author whom we have just mentioned further informs us respecting this nation, that "the Spaniards, as well as our other neighbours, being continually jealous of our superiority over them, formed a design of establishing themselves among the Missouries, about forty leagues from the Illinois, in order to limit our boundaries westward. They judged it necessary for the security of their colony, entirely to cut off the Missouries; and for that purpose they courted the friendship of the Osages, whose assistance they thought would be of service to them in the enterprise, and who were generally at enmity with the Missouries. A company of Spaniards, men, women, and soldiers, accordingly set out from Santa Fe, having a Dominican for their chaplain, and an engineer for their guide and commander. The caravan was furnished with horses, and all other kinds of beasts necessary;

²³ The Moyene River is the present Des Moines. See preceding volume, note 123.—ED.

²⁴ This was Fort Orleans, referred to *ante*, note 29. For further details, see Bradbury's *Travels*, in our volume v, note 26. Notice of Du Pratz will be found in Nuttall's *Journal*, volume xiii of our series, note 89.—ED.

for it is one of their prudent maxims, to send off all those things together. By a fatal mistake the Spaniards arrived first amongst the Missouries, whom they mistook for the Osages; and imprudently discovering their hostile intentions, they were themselves surprised and cut off by those whom they intended for destruction. [64] The Missouries some time afterwards dressed themselves with the ornaments of the chapel; and carried them in a kind of triumphant procession to the French commandant among the Illinois."⁸⁸ A terrible but just revenge! The Missouries continued to dwell in the same locality, until, about twenty years since, they were conquered and dispersed, by a combination of the Sauks, Foxes, and some other Indians; when they united their destiny with other friendly nations. Five or six lodges joined the Osages; two or three took refuge with the Konzas; and the chief part of the remainder amalgamated with the Oto nation, with whom they still reside. Thus connected, their manners, habits, and language being very closely allied, the Otoes and Missouries may be considered as one nation. They are probably the bravest of the native inhabitants of the Missouri; and there are but few males who have arrived at the age of maturity, that have not fleshed their arms in battle. Indeed, many of them can *strike* upon individuals of almost all the neighbouring nations, not excepting the distant Indians of Mexico, and the Spaniards themselves.

In vain should we seek among the nations of the Missouri for an individual whose daring deeds have been more numerous than those of the Little Soldier, or for

⁸⁸ The reference is to the English edition of Du Pratz, *History of Louisiana* (London, 1763), ii, p. 157. See Charlevoix's account in *Wisconsin Historical Collections*, xvi, pp. 413, 414.—ED.

more brave and generous combatants than Shaumonekusse, Hashea, Nahojeningya, and Wasacaruja. It is not fear, but probably a generous forbearance, that has restrained them from killing more than two white men within the memory of the present generation. Of these, one, a Frenchman, was killed by A-kira-ba during the Spanish government; and the other, a Spaniard, by Shaumonekusse, more recently, at the sources of the Arkansa; an act, which, although attended by an extraordinary display of bravery, was declared by this young warrior to be the only martial act of his life that he was ashamed of.

[65] The hunting grounds of the Oto nation extend from the Little Platte up to the Boyer creek, on the north side of the Missouri, and from Independence creek to about forty miles above the Platte, on the south side of that river. They hunt the bison between the Platte and the sources of the Konza rivers.

A few years since, their numbers were very much diminished by the small-pox.

The language of the Otoes, Missouries, and Ioways, although the same, is somewhat differently pronounced by these respective nations or tribes. The dialect of the Ioways is more closely allied to that of the Oto than to the Missouri dialect; the former differs chiefly in being pronounced more sharply, as in the word In-ta-ra, *friend*, which in the Oto is In-ta-ro. The Missouri dialect differs in being more nasal; the children, however, of this nation being, from their residence among the Otoes, in constant habits of association with the Oto children, are gradually assuming the pronunciation of that nation.

Originally the same, and still very similar to the above

dialects, are those of the Osages, Konzas, Omawhaws, and Puncaws, the individuals of each of which nations can make themselves reciprocally understood, after a very little practice. The two latter dialects are so very closely allied, as not to be distinguishable from each other, by persons who are not very critically acquainted with the language. The Omawhaw and Puncaw pronunciation is more guttural than that of the two former, of which, particularly the Osage, the pronunciation is more brief and vivid.

The free and independent spirit of the Indian is carried even into their language, and may be recognised there by its absolute destitution of a single word drawn from the language of a civilised people. Thus, notwithstanding their constant familiarity with [66] certain traders, and with various articles of the manufacture of the white people, they universally, and in every instance, reject the names which they originally hear for such men and things, and apply others, which they readily invent.

[67] CHAPTER VI [IV]

Boyer's Creek — Visit to the Pawnees — Human Sacrifices — Anecdote of Petalesharoo — Appendix.

ON the 12th, Lieutenant Graham, Lieutenant Talcott of Camp Missouri, Mr. Seymour, and I, accompanied by a soldier, departed in our small row-boat, for the purpose of ascending Boyer creek,²² and ascertaining the point at which that stream discharges from the bluffs. The rapidity of the Missouri current soon transported us to the mouth of the creek, and we encamped, after

²² For Boyer Creek, see preceding volume, note 174.— Ed.

ascending it the distance of a few miles. From this point Messrs. Graham and Talcott crossed the bottom lands, to the base of the bluffs, and by trigonometrical observation, ascertained the altitude of the highest point to be three hundred and fifty feet above low water mark of the Missouri. The next day we continued our voyage, but about noon, perceiving that some necessities had inadvertently been omitted in our loading, we despatched the soldier to the cantonment to procure them.

The following morning we were awakened by the loud cries of the sandhill crane, performing evolutions in the air, high over their feeding grounds. This stately bird is known to authors by the name of *grus canadensis*. It is mentioned by the enterprising and excellent traveller, Bartram,⁸⁷ in his work, and is very distinct from the *grus Americanus* of authors, or hooping crane, although many persons have supposed it to be no other than the young of that gigantic species. The sandhill crane, in the spring of the year, removes the surface of the soil by [68] scratching with its feet, in search of the radical tubers of the pea vine, which seem to afford them a very palatable food. Near our present encampment, and in many other situations bordering on streams of water, where this plant vegetates in the greatest profusion, we have frequently had occasion to observe that the surface of the soil was removed in small and irregular patches, by the industry of this bird in seeking for its favourite food.

This crane is a social bird, sometimes assembling together in considerable flocks. They were now in great numbers, soaring aloft in the air, flying with an irregular kind of gyratory motion, each individual describing a

⁸⁷ For sketch of Bartram, see André Michaux's *Travels*, in our volume iii, note 177.—ED.

large circle in the air independently of his associates, and uttering loud, dissonant, and repeated cries. They sometimes continue thus to wing their flight upwards, gradually receding from the earth, until they become mere specks upon the sight, and finally altogether disappear, leaving only the discordant music of their concert to fall faintly upon the ear.

Mosquitoes have already made their appearance in small numbers.

April 14th. The messenger returned and the voyage was continued. The creek was found to be very tortuous, and the navigation much impeded by fallen trees, extending in various directions across the stream, obliging us to resort to the use of the axe in many places, to obtain a passage for our boat. In the evening we arrived at the bluffs. The water had now become so shallow as not to admit of our further passage with the boat, which was left under the care of our man, and having made the necessary observations for ascertaining the latitude, on the following day we took our blankets on our backs, and proceeded on foot, intending to travel one day's journey further along the stream. At the distance of about five miles, the high grounds closely bounded the creek, and the valley, which below is extensive [69] and fertile, disappears. We saw numbers of the smaller species of rattle-snake, which had, no doubt, but lately left their winter dwelling. The creek, as observed this afternoon, although still about thirty feet wide, is, in some places, not more than six inches deep, whilst in other parts it is two or three feet. As we went forward, the timber gradually decreased in quantity, until finally it was interrupted into remote small assemblages of trees, under one of which we spread our blankets, after a sultry day's

march over a tolerably fertile country. Numbers of ant hills are dispersed over the soil, and in many places are abundant; we could not choose but admire the assiduous industry of the little inhabitants, who were now engaged in repairing the structures for the approaching season of activity. The autumnal conflagration, which had comprehended within its destructive range almost the whole surface of the country, had consumed a large portion of the fragments of wood, which, intermixed with earth, forms the exterior wall of their mounds; these the emmets were now unremittingly employed in replacing, with half-burned sticks, which were sought for in every direction. Verdure was appearing in favourable situations, and the ash was in full bloom, which tree, associated with the elm and willow, comprehends the chief portion of the few trees that were here seen. In the night we were awakened by a heavy fall of rain, and our attention was directed to personal safety by tremendous thunder and lightning, directly in the zenith, and we abandoned our guns and blankets to take refuge in the open prairie. This situation was peculiarly uncomfortable; we had been languid and oppressed by the heat of the sun during the afternoon's walk, and we were now shivering under the effects of cold and moisture. In the intervals we kindled our fire, and became alternately, partially dry, and wet, as the fall of rain intermitted and recurred.

[70] At the dawn of day we retraced our path, and found the tent pleasantly situate in an embowered spot, where three rattle snakes had been killed by the soldier pitching it. On the following day we descended the creek.

18th. The creek was rapidly subsiding, so that a bridge constructed by the Omawhaws, which we had passed almost unobserved, was now two feet above the surface

of the water, and rendered it necessary to unload the boat in order to drag her over. This structure is very simple; a double series of stout forked pieces of wood are driven into the bottom of the creek, upon these, poles are laid transversely, crossed by numerous smaller pieces, which form a support for dried grass covered by a proper quantity of earth. What necessity gave rise to the building of this bridge we know not, and we are inclined to believe, that bridge-building is a rare effort in our aboriginal architecture.

On the 20th, Major O'Fallon set out on a visit to the Pawnee villages, accompanied by Captain Riley, Adjutant Pentland, Lieutenants Talcott and Graham, Mr. Dougherty and myself, together with a guard of twenty-seven men, and with seventeen pack and riding horses.²⁸ In recording the events of this journey, it would be superfluous to note the appearance of the country over which we passed, or to describe the magnitude and direction of the water courses that intersect the route, as this will be detailed in another part of the work; our attention in the few following pages will be more particularly directed to our transactions and interviews with the natives. In the course of the two following days, we met with several Oto and Omawhaw Indians, who were occupied with hunting and trapping. On the 23d we halted a short time with

²⁸ Bennett Riley, of Maryland, began his army career in 1813, as ensign in the rifles, attaining a captaincy in 1817. In 1821 he was transferred to the infantry, in which he attained successively the rank of major (1837), lieutenant-colonel (1839), and colonel (1850). He died in 1853.

Andrew Talcott entered West Point in 1815, from Connecticut, and on graduation (1818), was promoted into the army with the brevet rank of second-lieutenant in the corps of engineers. He resigned his commission in 1836, being then captain, and was engaged until 1860 chiefly on railroad and mining enterprises; he was a member of the Northwest Boundary Commission (1840-43). He died in 1883, aged eighty-six.—ED.

a party of the latter nation, headed by a man of much note, known to the traders by the name of the *Voleur*,³⁹ the relics of whose former village, we had previously observed on Shell Creek.⁴⁰ [71] Near this stream of water we examined a great excavation in the brow of a bluff, to which the name of *Pawnee Medicine* has been applied, in consequence of its being an object of superstitious reverence to the people of that nation. It is evidently an artificial work, and the product of much labour, being about two hundred feet long, one hundred and thirty feet wide, and thirty feet deep. The origin and object of this effort of savage labour is involved in mystery, and the Pawnees cannot, at this day, give any rational history of it; the only advantage which we can suppose people to have derived from such a work, is security from the attack of a powerful enemy. An entire nation may have here defied the efforts of some allied army of an extensive coalition. We are inclined to conjecture, that the nation that has left us this monument of a primitive military art, is no other than the Rickarees,⁴¹ who now reside on the banks of the Missouri, between the Sioux (Dacota) and Mandan nations, and who are, beyond a doubt, a branch of the Pawnee stock, and probably are more immediately descended from that branch of it, now known as Pawnee Loups. We are led to this conjecture, however, only from the fact, that ruins of their former village, apparently coeval with the excavation, exist within two miles of Beaver Creek.⁴² In this vicinity, several antelopes (*Cervicapra Americana*, Ord)

³⁹ Meaning "The Thief."— Ed.

⁴⁰ Shell Creek is a tributary of the Platte, flowing from the northwest across Platte and Colfax counties.— Ed.

⁴¹ The Arikara; see Bradbury's *Travels*, in our volume v, note 83.— Ed.

⁴² Beaver Creek is a northern tributary of Loup River, which it joins in Nance County.— Ed.

were seen by the party, but they were so shy and swift, that it was not possible to kill one of them.

On the succeeding day, a large body of Indians was observed in the distance moving towards us, which proved to be the principal portion of the Oto nation, who were now returning to their own village, from a trading visit to the Pawnees. We here met with numerous acquaintances, who saluted us cordially, although they appeared somewhat jealous of our visit to the Pawnees. The Little Soldier rode up with great animation, and communicated to some [72] of us, by means of signs, an intimation that a glorious battle had been fought by a party of Pawnee Loups, in which the greater part of them had been killed, and nearly all the remainder of them wounded.

We resumed our journey, and at the distance of two or three miles observed numerous horses grazing over the plain, squaws occupied in pitching skin lodges, and men advancing to meet us; they were soon recognized for Omawhaws, and informed us that they were engaged in hunting. We were soon joined by the Big-horse, Crenier, and other chiefs and warriors of the Oto and Omawhaw nations, who remained a considerable time, and received a small present of tobacco at parting.

At Willow Creek,* several Pawnees were observed on the opposite side at a distance, who avoided us, and as we continued on during the afternoon, many of them appeared at different times and places, on the bluffs, which, at a little distance, bounded our route to the right; but, like the first we had seen, they would not approach our party, but retired on our advancing towards them.

* Willow (now Cedar) Creek rises in Garfield County and flows southeast to the Loup; Fullerton, seat of Nance County, is at its mouth. Willows grew on its banks and cedars on the bluffs a little farther from the water; hence both names were applied by the Pawnee.—ED.

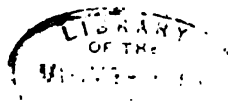
The evening encampment was pitched at a favourable position, on the bank of the Loup Fork, where we found a boy guarding horses; he had a melancholy air, and his appearance interested us much; a number of squaws had fled at our approach, but he remained unmoved. He invited us to continue onward to the village, stating the probability of a fall of rain on the coming night. "Are you not afraid," we asked, "to remain here all day, at such a distance from your village?" "No," said he, with the utmost indifference; "the Sioux have not been here this long time past, but I saw a great many men and horses to-day on the opposite side of the river: they may have been Sioux: I don't know." Being presented with a biscuit, he ate part of it, and put the remainder in his belt for his parents, that they might taste of the food of the white people.

[73] In the evening Semino, a Canadian interpreter residing with the Pawnees, arrived with a letter from Mr. Papan,⁴ (a trader in the nation,) stating, that as some misunderstanding had occurred amongst the chiefs, Tararecawaho had declined meeting the party, to escort us into the village, as he had previously intended to do.

This conduct of the chief was altogether unexpected, inasmuch as he had invited the agent, at the autumnal council, to visit his village, and requested him to halt his party at some distance, and inform him of his proximity, that he might be received with due ceremony. Major

⁴ I gladly avail myself of the opportunity of noticing the many attentions which we received from this gentleman. At this time particularly, he rendered us essential services, in which he appeared to take much pleasure.—JAMES.

Comment by Ed. Laforce Pappan (Papin, Papan) was probably the grandson of Joseph Pappan, a Canadian fur-trader who came to St. Louis about 1770, and was for many years a trader among the Pawnee. He died of cholera (1848) while on his way to St. Louis. Emily, his daughter by a Pawnee woman, married Henry, son of Lucien Fontenelle (see preceding volume, note 196).



O'Fallon, immediately perceiving the necessity of supporting the dignity of his mission in the eyes of these Indians, in order the more effectually to command their respect, directed the messengers to return forthwith and tell that chief, that "he must consider well whom he is about to receive; if he will not meet me in a proper manner, I will pass through his village, without looking at him or his people, and visit the next village, and so on to the third; and if I shall not be properly treated at either, I will return to Camp Missouri to count the graves of the soldiers whom he has heard died there." No further communication was received respecting the intentions of the great chief, and early on the succeeding morning our journey was resumed.

After riding a considerable distance over a beautiful plain, we came in view of the village of the Grand Pawnees, and saw in every direction great numbers of horses and mules, and a few asses attended by men and boys. At some distance on the left, the Loup Fork meandered, on the bank of which stream was a long line of squaws bearing [74] heavy burdens of fuel towards the village. A chief was soon observed advancing with rapidity; he was received by our cavalcade with music playing, and flags displayed, and was recognized to be Sharitarish, eldest son of the chief of that name commemorated by Lieutenant Pike, and now second chief of the Grand Pawnees; the interpreters being absent, no particular communication was interchanged, and we moved on.⁴⁵ A short time,

⁴⁵ The Sharitarish of Pike, whom he calls Characterish, was chief of the Republican Pawnee, whom he visited in September, 1806. He also mentions Ishcatappa (Iskatappe). See Coues, *Expeditions of Zebulon M. Pike*, ii, p. 409. The portrait of the younger Sharitarish is given in McKenney, *Indian Tribes of North America* (Philadelphia, 1854), i, p. 33. He succeeded Tarrarecawaho as grand chief, but died soon afterwards, aged about thirty.—ED.

however, only elapsed before Tarrarecawaho approached in full dress. We could not choose but admire the lofty dignity of his appearance; but his extreme hauteur became manifest when he halted at the head of our line, by not offering his hand, or even deigning to look at us. This deportment was reciprocated, and we moved onward again without particularly noticing him, excepting by the short intermission of movements which had taken place, we were soon informed from the rear, that the Grand Chief was making signs to induce us to halt; but finding that his imperious deportment gained no respect, and that his present request was altogether disregarded, he at once relinquished the high grounds which he had seemed anxious to maintain, and riding forward, he condescended to offer his hand to each of us in succession.* The interpreters having rejoined the party, Major O'Fallon was enabled to communicate with the chief and principal men, such as Tartiwišta, chief of the Tappage band, Ishcatappa, brother of Sharetarish, and others, who successively arrived. He then addressed Tarrarecawaho briefly thus: "Long Hair, I have come to visit you agreeably to your invitation, and desire to know whether or not you are glad to see me." The chief answered, "That I am glad to see you, the display of these medals on my dress, and those flags of your nation which are waving in my village, will amply testify." He concluded by inviting us to his lodge, but we informed him that we had brought our own lodges [75] and provisions; we would, however, accept of his hospitality by

* The hauteur here ascribed to Tarrarecawaho is in keeping with the story that he refused an invitation to visit Washington, esteeming the Pawnee the greatest people in the world, and thinking such a visit involved condescension. He sent Sharitarish in his stead.

Ishcatappa succeeded Sharitarish in the chieftainship. By the Omaha he was called "The Wicked."— Ed.

partaking of his food. We then performed a half circuit around the village, and entered it with the sound of the bugle, drum, and fife, with which the commonalty and children seemed highly delighted, following, or rather walking beside the musicians obliquely in two extensive wings, exhibiting the form of the letter V. Of these instruments the bugle was most decidedly the favourite. We passed by and saluted the mansions of the chiefs, at each of which an American flag was hoisted, with the exception only of one that was passed unnoticed, owing to its being distinguished by a Spanish flag; which, however, was struck as soon as the cause of the procedure was understood. This ceremony being performed, the men were marched off to encamp, and we entered the dwelling of the Grand Chief. After partaking of some excellent boiled bison meat, he requested to know if we would condescend to eat at the houses of the warriors; but the agent informed him that we could only accept of the hospitality of chiefs. We were then conducted to six other feasts, in immediate succession, after which we retired to the encampment that had been formed in a low prairie near the town.

During our stay in Tarrarecawaho's lodge, Major O'Fallon spoke at some length to that chief. He informed him that thus far he was pleased with the reception he had given us; that he had come to repeat in the village, the same words that had been uttered at Engineer Cantonment, &c. The manner as well as the matter of the address, seemed to command undivided attention; every eye was riveted upon the speaker, and the most profound silence reigned throughout a crowded audience, that preserved a respectful distance behind the chiefs that were seated directly before us.

Instead of an immediate reply, Tarrarecawaho, who

alone had remained standing, addressed his [76] warriors in a loud, fluent, and impassionate manner: "I am the only individual of this nation, that possesses a knowledge of the manners and power of the whites. I have been to the town of the Red Head, (Governor Clarke, at St. Louis,) and saw there all that a red skin could see. Here sits a chief, (pointing to the agent,) who controls every thing in this land; if he should prohibit you from wearing breech-cloths, you could not wear them. You know that we cannot dispense with powder and balls; you must also know that we cannot dispense with this chief, as he can prevent us from obtaining them. I have no personal fear; I only dread the consequence of improper conduct, to the women and children; take pity on your women and children, warriors. When he tells you that he is a chief, he speaks truly; when he says that his soldiers appear like the grass in the spring, in place of those who die, he speaks truly; you, my nation, are like the fly in strength, just so easily can his mighty nation crush you between their fingers. Young men, I have done; to morrow I will invite the American chief to council, and if any of you wish to speak to him then, you have my consent. Do as I do; I am not ashamed of what I have done; follow my example."

He then, in a mild tone and polite manner, informed the agent that he would consult his chiefs, and would return an answer to his speech to-morrow.

Accordingly, about noon on the 26th, a messenger arrived with information that the chiefs and warriors were ready to receive the agent, and we repaired to the lodge in which the assembly was convened. They formed a circle round the chamber, sitting on grass mats; the chiefs occupied the back part of the lodge, directly in front of whom we were invited to be seated, on mats

spread for our reception. A profound silence ensued, during which the eyes of the assembly were occasionally turned by a glance upon [77] Tarrarecawaho, who at length arose, and after a short harangue, held his pipe to the Major to smoke, signifying that he presented a horse. Several speakers succeeded, who generally presented the pipe in the same manner. After an address from Major O'Fallon, who concluded by inviting the principal men to our camp, to present them with "a pipe of tobacco," the council dissolved.

On the expiration of two or three hours, the chiefs and warriors appeared at our camp, and seated themselves on robes and blankets, before our tent, whilst several hundred of the people encompassed us, keeping, however, at a respectful distance. When the agent had terminated some appropriate observations, he deposited before Tarrarecawaho, Sharetarish, and the Tappage chief, the presents he intended to make, in as many separate parcels. A difference having for some time existed between the two first-mentioned chiefs, the former, who was in fault, having threatened to chastise the other, and on being challenged by him, refused to decide the controversy by single combat, now availed himself of a favourable opportunity to obtain a reconciliation, by presenting to Sharetarish his entire parcel of merchandize: Sharetarish then proceeded to parcel out his double portion, consisting of fusils, powder and ball, strouding, blankets, calico, &c. amongst the multitude, reserving nothing for himself. He laid a portion at the feet of Tarrarecawaho, and this chief again performed the part of a donor, retaining only a United States' flag, and expressed his satisfaction and thanks to the agent, for the merchandize they had received. Sharetarish said, that, if agreeable to his father, (Major O'Fallon,) he would

return in a reasonable time, and bring some of his young warriors, for the purpose of performing a dance.

Towards evening, Sharetarish arrived with his dancers, thirty or forty in number, who were all accoutred and painted for the occasion. This exhibition, [78] which would have appeared to us to partake much of the terrific, did we not feel assured of their pacific disposition, bore considerable resemblance to that performed by the Otoes at Engineer Cantonment, already described, excepting that less pantomimic action was used, and *striking the post* formed no part of the ceremony. At the termination of the dance, Sharetarish presented Major O'Fallon with a painted bison robe, representing several of his own combats with the enemy, as well as those of his friends, all of which he explained to us.

27th. The tents were struck, and we departed for the village of the Pawnee Loups. At the distance of four miles, we passed the Republican village, about a mile on our left; from thence the distance is about three miles to the Loup village, over a beautiful bottom plain of the width of a mile and a half, extending along the Loup fork of the Platte. This plain is nearly thirty feet lower than that over which we had travelled, and which terminates abruptly at the Grand Pawnee village. When within two miles of the village of the Loups, a messenger requested the party to halt, in order to give the chiefs the requisite time to make their preparations to receive us in a manner suitable to the representative of a nation "so great and powerful as that of the Big-knives."

After waiting a short time, we observed, at the distance of a mile before us, a great number of mounted Indians emerging suddenly, apparently from the plain itself, for we could not then see a ravine that had previously concealed

them from our view. They immediately began to ride in various directions, and to perform numerous evolutions, until the whole were arranged in a widely-extended line. These rapid movements, which attracted our attention from other objects, having ceased, we perceived a small body of men in front, whose movements were independent of the others, and who were advancing at a moderate pace. When all were formed, they set forwards, [79] slowly at first, but gradually increasing their speed as they approached, until they surrounded us at a full charge. It is impossible by description to do justice to the scene of savage magnificence that was now displayed. Between three and four hundred mounted Indians, dressed in their richest habiliments of war, were rushing around us in every direction, with streaming feathers, war weapons, and with loud shouts and yells. The few whom we had observed in advance of the main body, and whom, as they came near, we recognized to be the chief men, presented a perfect contrast to the others in their slow movements, and simplicity of dress. Courtesy obliged us to shake hands with each individual, as they came to us in succession for that purpose, nor was a single soldier of our train forgotten on this occasion by any one of them. They expressed great satisfaction on account of our visit, rubbing their breasts in token of the sincerity of this pleasure. Many remarked that the nation had been mourning for their grievous losses in a recent battle with an enemy, but that now grief should give place to rejoicing. Major O'Fallon addressed the Indians as usual, after which we again moved on towards the village. Latelesha, the grand chief, perceiving that the division of his warriors that were on our left, raised some dust on the march, ordered them all to leeward, that we might not be incommoded. Almost from the begin-

ning of this interesting fête, our attention had been attracted to a young man who seemed to be the leader or partizan of the warriors. He was about twenty-three years of age, of the finest form, tall, muscular, exceedingly graceful, and of a most prepossessing countenance. His head dress of war eagles' feathers, descended in a double series upon his back like wings, to his saddle croup; his shield was highly decorated, and his long lance was ornamented by a plaited casing of red and blue cloth. On inquiring of the interpreter, our admiration was augmented by learning [80] that he was no other than Petalesharoo, with whose name and character we were already familiar. He is the most intrepid warrior of the nation, eldest son of Latelesha, destined as well by mental and physical qualifications, as by his distinguished birth, to be the future leader of his people. Seeing that his father had taken a place in our cavalcade on the left of Major O'Fallon, he rode up on his right to the exclusion of a brave officer who had previously occupied that situation, and who now regarded him with an apparently stern aspect, but in which there was perhaps more of admiration than of irritation at this unexpected intrusion. The young chief caught the look, and retorted with an eye that seemed never to have been averted through fear. The name of Petalesharoo is connected with the abolition of a custom formerly prevalent in this nation, at which humanity shudders.

✓ The Pawnee Loups heretofore exhibited the singular anomaly, amongst the American natives, of a people addicted to the inhuman, superstitious rite, of making propitiatory offerings of human victims to Venus, the *Great Star*. The origin of this sanguinary sacrifice is unknown; probably it existed previously to their intercourse with the

white traders. This solemn ceremony was performed annually, and immediately preceded their horticultural operations, for the success of which it appears to have been instituted. A breach of this duty, the performance of which they believed to be required by the Great Star, it was supposed would be succeeded by the total failure of their crops of maize, beans, and pumpkins, and the consequent total privation of their vegetable food.

To obviate a national calamity so formidable, any person was at liberty to offer up a prisoner of either sex, that by his prowess in war he had become possessed of.

[81] The devoted individual was clothed in the gayest and most costly attire; profusely supplied with the choicest food, and constantly attended by the magi, who anticipated all his wants, cautiously concealed from him, the real object of their sedulous attentions, and endeavoured to preserve his mind in a state of cheerfulness, with the view of promoting obesity, and thereby rendering the sacrifice more acceptable to their Ceres.

When the victim was thus sufficiently fattened for their purpose, a suitable day was appointed for the performance of the rite, that the whole nation might attend.

The victim was bound to a cross, in presence of the assembled multitude, when a solemn dance was performed, and after some other ceremonies, the warrior, whose prisoner he had been, cleaved his head with the tomahawk; and his speedy death was insured by numerous archers, who penetrated his body with their arrows.

A trader informed us that the squaws cut pieces of flesh from the deceased, with which they greased their hoes; but this was denied by another, who had been present at one of these sacrifices. However this may be, the ceremony was believed to have called down a blessing upon their

labours of the field, and they proceeded to planting without delay.

The present mild and humane chief of the nation, Latelesha, or Knife Chief, had long regarded this sacrifice as an unnecessary and cruel exhibition of power, exercised upon unfortunate and defenceless individuals, whom they were bound to protect; and he vainly endeavoured to abolish it by philanthropic admonitions.

An Ietan woman, who was brought captive into the village, was doomed to the Great Star by the warrior, whose property she had become by the fate of war. She underwent the usual preparations, and, on the appointed day, was led to the cross, amidst a [82] great concourse of people, as eager, perhaps, as their civilized fellow men, to witness the horrors of an execution. The victim was bound to the cross with thongs of skin, and the usual ceremonies being performed, her dread of a more terrible death was about to be terminated by the tomahawk and the arrow. At this critical juncture, Petalesharoo (son of the Knife Chief) stepped forward into the area, and in a hurried but firm manner, declared that it was his father's wish to abolish this sacrifice; that for himself, he had presented himself before them, for the purpose of laying down his life upon the spot, or of releasing the victim. He then cut the cords which bound her to the cross, carried her swiftly through the crowd to a horse, which he presented to her, and having mounted another himself, he conveyed her beyond the reach of immediate pursuit; when, after having supplied her with food, and admonishing her to make the best of her way to her own nation, which was at a distance of at least four hundred miles, he was constrained to return to his village. The emancipated Ietan had, however, the good fortune, on her journey of the subsequent day, to

meet with a war party of her own people, by whom she was conveyed to her family in safety.⁴⁷

This daring deed would, almost to a certainty, have terminated in an unsuccessful attempt, under the arm of any other warrior; and Petalesharoo was, no doubt, indebted for this successful and noble achievement to the distinguished renown which his feats of chivalry had already gained for him, and which commanded the high respect of all his rival warriors. Notwithstanding the signal success of this enterprise, another display of the firmness and determination of the young warrior was required to abolish this sacrifice, it is to be hoped for ever. The succeeding spring, a warrior, who had captured a fine Spanish boy, vowed to sacrifice him to the Great [83] Star, and accordingly placed him under the care of the magi, for that purpose.

The Knife Chief, learning the determination of the warrior, consulted with his son, respecting the best means of preventing a repetition of the horrible ceremony. "I will rescue the boy," said Petalesharoo, "as a warrior should, by force;" but the Knife Chief, unwilling that his son should again expose himself to a danger so imminent, as that which he had once encountered in this cause, hoped to compel the warrior to exchange his victim for a large quantity of merchandize, which he would endeavour to obtain with that view. For this purpose he repaired to Mr. Pappan, who happened to be in the village for the purposes of trade, and communicated to him his intentions.

⁴⁷ Petalesharoo visited Washington in 1821-22, and the ladies of the city presented him with a medal for the humanity and bravery he had displayed in rescuing the Ietan girl. The incident was also made the theme of a rhymed effusion in the *New York Commercial Advertiser*, entitled "The Pawnee Brave." This accompanied by a portrait of Petalesharoo is to be found in McKenney, *Indian Tribes*, i, p. 143.—ED.

Mr. Pappan generously contributed a considerable quantity of merchandize, and much was added by himself, by Petalesharoo, and other Indians.

All this treasure was laid in a heap together, in the lodge of the Knife Chief, who thereupon summoned the warrior before him. The chief armed himself with his war-club, and explained the object of his call, commanding the warrior to accept the merchandize and yield up the boy, or prepare for instant death. The warrior refused, and the chief waved his club in the air towards the warrior. "Strike," said Petalesharoo, who stood near to support his father; "I will meet the vengeance of his friends." But the more prudent and politic chief added a few more articles to the mass of merchandize, in order to give the warrior another opportunity of acquiescing without forfeiting his word.

This expedient succeeded; the goods were reluctantly accepted, and the boy was liberated, and was subsequently conducted to St. Louis by the traders. The merchandize was sacrificed in place of the boy; the cloth was cut in shreds, and suspended by poles at the place of sacrifice, and many [84] of the valuables were consumed by fire. It is not expected that another attempt will be made to immolate a human victim, during the life of Petalesharoo, or of his benign father.

Our cavalcade performed a circuit round the village, and saluted at the lodge of Latelesha, upon which the flag of the United States was hoisted; the soldiers were then marched to a proper encampment place, and we were feasted as before. Great order prevailed in this village, and silence reigned throughout, which was attributed to their loss of friends and kinsmen.

On the following day the council was held, at which

eleven horses and mules were presented in the usual manner. In two instances, however, the horse was represented by a cord or halter attached to a stick. One of these cords was drawn by a little Ietan girl, that Petalesharoo had captured in some battle and adopted as his daughter; she seemed to be the favourite of his family.

In the afternoon the greater part of the population were observed coming from the village towards our camp. As they drew near, we ascertained that many were painted, armed, and decorated as if for war. Petalesharoo advanced, and gave notice that he had brought some of his warriors, for the purpose of honouring his American father with a dance. The dancers were about forty in number, and their movements and evolutions were similar to those of the Grand Pawnees. The deep-toned gong was so entirely concealed in the centre of the mass of dancers, that it was with difficulty we ascertained whence the wild and measured sound proceeded, which regulated their simultaneous movements. It was accompanied by other simple instruments, and occasionally interrupted from the ear by the piercing note of the whistle, or the sudden discharge of a gun, with the muzzle directed to the earth. At the termination of the first dance, the partizan requested [85] the accompaniment of our music for the succeeding dance. The music accordingly struck up, with the renewed beating of the gong; but it immediately threw them all into confusion, and after vainly endeavouring to regain their regularity, they ceased. Again the experiment was tried, and again it produced inextricable confusion. This repeated result brought a smile to the countenance of the partizan, who expressed his conviction, that his party was unable to dance to the music of the white people.

The principal men having now arrived, agreeably to in-

vation, they were introduced into a large skin lodge which had been erected for us by the orders of Latelesha, as our marquee was too feeble to resist a strong wind which prevailed during the day. Presents were made to Latelesha and the Metiff chief. The latter transferred his parcel to Latelesha, who laid the whole before Petalesharoo, to dispose of as he thought proper. The young chief appointed two persons to distribute them; and thus the whole was disposed of, though very unequally. The chiefs then returned their thanks and withdrew.

I passed the night at the lodge of the Metiff chief, and in the evening was amused by the exhibition of another dancing party, who concluded by inviting the chief to partake of a feast, to be given on the following day, for the purpose of dispelling his grief for the loss of his brother, in the late contest with the Indians of the Rocky Mountains.

This severe battle was fought by ninety-three Pawnee Loup warriors, against a large body of Ietans, Arrapahoes and Kiawas.⁴⁸

The party was led by the most distinguished brave of the village, and half brother of the Metiff chief, but of unmixed blood, and a principal supporter of the influence of that chief. The party, who were all on foot, were on their way to capture horses, but they were badly armed for a contest, and had but [86] twelve guns amongst them.

⁴⁸ The Arapaho were a tribe of Algonquian stock, which, with the kindred Cheyenne, had pushed their way through the country of the hostile Sioux to the region of the Black Hills; later, they entered Wyoming and Colorado. Their present number is about seventeen hundred, half in Oklahoma and half in Wyoming.

The Kiowa are generally regarded as an independent stock (see Bureau of Ethnology *Report*, 1885-86, p. 84), whose pristine territory was rather indefinitely located on the upper Arkansas and Platte. The Comanche were closely associated. There are now about eleven hundred Kiowa in Oklahoma.—Ed.

They were proceeding cautiously along in the prairies between the head waters of the Arkansa and the Rio del Norte, when one party of their runners, or discoverers, came in with information that a great body of the enemy were ahead, and had not seen them; another party of runners soon came in with the same information. The whole now halted to wait for night to capture horses, and busied themselves in preparing their ropes and halters, and in putting themselves in the best order in case of attack. One of the party ascended a small eminence, and perceived three of the enemy mounted and coming on in full career; presently more appeared, and soon after they began to show themselves in every quarter. It was now evident to the party, that the enemy were the first discoverers, and that they were now necessitated to contend against a vastly superior force, better armed than themselves, and possessing also the advantage of being all mounted on good horses. It was obvious also that there was no hope for them, but in the display of desperate valour. Their first wish had been to gain a creek at some distance in the rear, which was margined with small timber; but as their enemy now completely surrounded them, this was impossible. The battle commenced about ten o'clock A. M., and soon raged with great fury. Every muscle was called into action in our little band, who hung firmly together, discharging their arrows and occasionally a fusee at the enemy with the steadiest aim. The dead and wounded were falling in every direction in both parties. The enemy were so numerous that numbers of their braves, armed only with a shield, having rejected their offensive weapons, hovered in front of their companions, intent only upon the acquisition of the renown dearest to the heart of the warrior, that of first striking the body of a fallen enemy; many of them

however were killed, even by their own people, as they rushed along and intercepted the flight of the [87] arrow or bullet from its destined mark. The combatants were at very close quarters, and the arrow had its full effect. They were for some time intermingled, and contended with their war-clubs and knives. The partizan, who had been wounded severely early in the action, and had received several more wounds during its continuance, now was struck by an arrow, which buried itself to the feathers in his body. He knew the wound was a mortal one, and fell, but supported himself upon the ground to encourage his men; "My braves," said he, "fight whilst you can move a limb, and when your arrows are expended take your knives." Looking around now upon his companions in arms, he perceived that nearly all his principal braves were killed or disabled, and with his dying words he ordered those who were still on their feet to pierce the surrounding enemy, and endeavour to save themselves in the timber of the creek. As soon as it was ascertained that their partizan was dead, his orders were carried into effect; and the remnant of the party fought their way to the creek, where the enemy abandoned them, and returned to exult over the slain. One only of the principal braves was left in this shattered band; he declared he was ashamed that he had survived, and he immediately ran back to the enemy, although much wounded, and was seen no more. The party now found that they had left fifty-three men dead, or disabled, on the battle ground, amongst whom were all their braves, who had exposed themselves to danger more than the others. Of their numbers, now diminished to forty, all were wounded, with the exception of seven only, and some of these very desperately; one individual had eight different wounds. As they had thrown off their

robes, breech-cloths, and leggings, at the commencement of the battle, they were now absolutely naked, and the weather was extremely cold. They made rude cars on which they drew along those who could not walk; and thus [88] they commenced and proceeded in their slow and laborious march to their village. During the journey some of the wounded requested to be killed, or left to die alone; and one who was wounded in the knee, after soliciting death from his brother repeatedly in vain, sought an opportunity to die, and finally plunged his knife in his heart. The party subsisted by killing a few bisons on the way, and partially clothed themselves with their raw hides; a miserable defence against the intensity of the cold.

The Grand Pawnees were more successful in war excursions during the winter. One of their parties encountered a party of Spaniards, who, my informant asserted, sought safety in flight. But it seems highly probable that a battle took place, and that many were killed; inasmuch as the victors returned with much clothing, merchandize, very handsome figured blankets, many horses, and some silver money. I was almost confirmed in this belief, by being subsequently informed that the party had certainly brought with them some scalps which were not those of Indians; and on passing through the village, I thought that some of the hair which streamed in the wind from numerous portions of human scalps, suspended on sticks from the roofs of the lodges, was taken from the heads of Spaniards.

These three bands or clans of Pawnees, although they harmonize well together at present, are not exempt from the lot of artificial distinctions; and party animosity sometimes occurs, which, in one instance, had nearly produced fatal consequences. The Puncaw Indians, having conceived themselves injured by the Pawnee Loups, applied

to the Grand Pawnees for aid in obtaining redress. The latter warmly espoused their cause, and the Grand Chief marched his warriors towards the Loup village, in avowed hostility. Petalesharoo hastily assembled his warriors for defence, and sallied out to meet the enemy; but finding their numerical force to be greatly superior [89] to his own, he saw that the resistance which his little band could offer, though it might check their career, would, in all probability, be insufficient to repel them. He therefore rode forward between the parties, and called aloud on Tarrarecawaho, who then advanced to meet him. The young chief immediately challenged him to a single combat; let us, said he, thus avoid the copious effusion of kindred blood, which otherwise must flow upon the earth in a general battle. This proposition was peremptorily refused. Then, said Petalesharoo, I must call you an old squaw, and a coward; return to your party and select for me the bravest of your men. This being also refused, Latelesha came forward, and by amicable negotiation adjusted the point in dispute. This village contains about one hundred and forty-five lodges.

29th. The horses that were *smoked* yesterday were brought this morning, and we departed on our return by way of the Republican village. When within a mile of the latter, we were again halted by a messenger, in order that the warriors might prepare to receive us properly. In about an hour they were seen issuing from the village, with four chiefs in front, who lamented aloud as they came near, in token of penitence for their offences. They proceeded to shake us by the hand, whilst about one hundred and fifty mounted, decorated, and painted warriors were rushing about us in every direction, whooping and yelling, and exhibiting such gracefulness and safety of riding as we had

never before witnessed, excepting at the Loup village, of which the present display was nearly a counterpart in miniature. In this sham attack, the partizan performed the part of our defender, hovering near us, and as the warriors charged upon us, he intercepted and repelled them. I expected to recognize amongst these warriors many of the individuals who had composed the war party that we encountered near the Konza village. I therefore scrutinizingly examined [90] the countenance and figure of each one as they successively offered their hands. But although I had on that occasion particularly noted the features of several of the war party, for the purpose of identifying them on a future time, I could now recognize but a single individual. I knew him immediately, and judging from the Indian character, he knew me equally well; yet his physiognomy, on presenting me his hand, was not varied in the slightest degree from the expression with which he regarded my companions, many of whom he had not before seen.

After saluting at the village as before, we were invited into the lodge of Fool Robe, the principal chief, an old man of about eighty years, destitute of any thing remarkable in his appearance. The chief men being assembled, the council was immediately held. Major O'Fallon arose, and spoke at considerable length, informing them of the great power of the United States; he detailed the glaring offences of the Pawnee Republicans, and concluded by offering them peace or war, though neither of these was solicited in preference. The chief men, in reply, manifested a great desire to adjust all differences, and promised to conduct themselves better in future. Fool Robe spoke well, but with evident embarrassment. They lamented their poverty, which prevented them from presenting more

than four horses, sixteen bison robes, and a package of dried meat. A chief of this nation, called Petalesharoo, who promised, at Engineer cantonment, to chastise the offenders, having neglected to execute this act of justice, retired from the village on our approach. The agent, on this account, declared to the council, that he wished never to see him again; that he did not consider him a brave man, as he was afraid to comply with his promise; and that if he ever should meet with him in council, he would compel him to sit with the young men. The council [91] was further assured, that the offences, which the young men of this nation had committed against white people, would be forgiven, but not forgotten. We had to regret the absence of the son of Fool Robe, a fine intelligent young man, who was engaged on some predatory excursion, at the head of one hundred and sixty warriors.

During the night a Konza war party carried off one hundred and forty horses from the village. .

The following day we returned to the village of the Grand Pawnees, and received the horses that had been presented at the council by the ceremony of the pipe. A quantity of merchandize had been brought with us from Camp Missouri, to exchange for horses for the service of the troops. This was put into the hands of Messrs. Pappan and Dougherty for that purpose; and we retired to our camp, which was upon the same spot as that we occupied on the night of the 24th instant.

May 1st. Mr. Pappan and Mr. Dougherty arrived from the village, having purchased nineteen horses and mules. The price of the horses and mules averaged about the amount of thirty dollars in Indian merchandize, estimated at the St. Louis valuation.

At each of the villages we observed small sticks, of the

length of eighteen inches or two feet, painted red, stuck in the earth in various situations, but chiefly on the roofs of the houses, each bearing the fragment of a human scalp, the hair of which streamed in the wind. Before the entrance to some of the lodges were small frames, like painters' easels, supporting each a shield, and generally a large painted cylindrical case of skin, prepared like parchment, in which a war dress is deposited. The shield is circular, made of bison skin, and thick enough to ward off an arrow; but not to arrest the flight of a rifle ball at close quarters.

Defended by this shield, a warrior will not hesitate to cross the path of an arrow; he will sometimes [92] dexterously seize the missile after it has struck, and discharge it back again at the enemy.

The lodges or houses of these three villages are similar in structure, but differ in size. The description of those of the Konzas will apply to them, excepting that the beds are all concealed by a mat partition, which extends parallel to the walls of the lodge, and from the floor to the roof. Small apertures, or doors, at intervals in this partition, are left for the different families that inhabit a lodge to enter their respective bed chambers.

In the evening Major O'Fallon presented each of us with a horse.

Several Indians came to our camp for the purpose of trading with the men. Major O'Fallon wished to obtain one of their horses, in exchange for one that he possessed; but the Indian modestly declined, saying, "My father, the horse you offer was given by my brother, which is the same as if I had given him myself; I will exchange for almost any other horse."

Early on the following morning we departed on our return to the Missouri, with a numerous retinue of horses,

amounting to more than sixty. On the way several bisons were killed, and three calves were taken alive in the chase, by throwing nooses over their heads.

On the 6th we arrived at the Missouri, after an absence of sixteen days. Much of the information we acquired, respecting the manners, &c. of the Pawnees, is incorporated in the account of the Indians of the Missouri, in some of the preceding chapters of this work.

[93] CHAPTER VII [V]

Journey by Land from St. Louis to Council Bluff — Grand River — Plains at the Sources of the Little Platte, the Nishnebottona, &c. — Departure of the Expedition from Engineer Cantonment.

WHILE the transactions above detailed were passing, Major Long had returned from the seat of government.

On the 24th of April 1820, he arrived at St. Louis, on his way from Philadelphia to Council Bluff, to rejoin the party. He was accompanied by Captain John R. Bell, attached to the exploring Expedition by order from the War Department, and by Dr. E. James, who had been appointed to serve as botanist and geologist, in consequence of recommendations from the Honourable Secretary of the Navy, from Dr. Torrey and Captain Le Conte.*

* John R. Bell was a New Yorker, who was graduated from West Point in 1812, and served in the light artillery through the War of 1812-15. For a short time prior to his departure for the Missouri, he was commandant of cadets and instructor in infantry tactics at West Point. Afterwards he was in garrison at Savannah and Fort Moultrie; breveted major in 1824, he died the succeeding year.

For sketch of Edwin James, the compiler of this account of the expedition, see preface of volume xiv.

The secretary of the navy at this time was Smith Thompson, of New York (1768-1843). He succeeded George Crowinshield, of Massachusetts, in this office (1818), and held the post until 1823. Previous to his appointment he

Having procured horses, and equipped ourselves for a journey in the wilderness, we left St. Louis on the 4th of May, intending to proceed by the most direct route across the country to Council Bluff.

The lands immediately in the rear of St. Louis, between the Mississippi and the Missouri, below their junction, have an undulated surface, and a deep alluvial soil. Since their occupation by permanent inhabitants, the yearly ravages of fire have been prevented, and a dense growth of oaks and elms has sprung up.

In this fact we have a satisfactory explanation of the cause of the present want of forest trees in extensive tracts on the Missouri, which appear, in every respect, adapted to the growth of timber. If these lands, called prairies, were at any former period covered with forests, it may easily be supposed, the [94] yearly devastations of fires breaking out in dry seasons would destroy many of the

had been on the supreme bench of New York (since 1802), and had become chief justice (1814). In 1823 he was made associate justice on the federal bench.

John Torrey (1796-1873), one of America's greatest botanists, was the son of a New York Revolutionary officer. Entering the army as a surgeon in 1824, he taught the sciences at West Point until 1828; from that time until 1855 he was connected, as professor of chemistry and botany, with Princeton College, the University of the City of New York, and the College of Physicians and Surgeons in New York City. He was one of the founders (1817) of the New York Lyceum of Natural History, which became the New York Academy of Sciences, and was the preceptor and lifelong associate of Asa Gray, with whom he also collaborated. Of especial interest to readers of the present volumes is the fact that Dr. Torrey undertook the examination of the botanical collections made on Long's expedition. He also examined the collections made by several later exploring parties, notably those of Frémont to the Rocky Mountains (1845) and California (1853).

John Eatton Le Conte (1784-1860) was descended from a Huguenot family which settled at New Rochelle, New York, about the close of the seventeenth century. He served in the corps of topographical engineers from 1818 to 1831, gaining the brevet rank of major. Known as the author of special botanical and zoological studies, he was also a member of the New York Lyceum of Natural History, and vice-president of the Philadelphia Academy of Natural Sciences.—ED.

trees. The forests being thus broken, the growth of grasses and annual plants would be greatly facilitated by the nakedness of the soil, and the free admission of the rays of the sun. Forests attract rain, and impede evaporation; while the reverberation from the surface of vast plains, and deserts, tends to dissipate the clouds and vapours which are driven over them by the winds. In fertile districts like the alluvial lands of the Missouri and Mississippi, a heavy annual growth of herbaceous plants is produced, which, after the autumnal frosts, becomes dry and peculiarly adapted to facilitate and extend the ravages of fire. In a country occupied by hunters, who are kindling their camp fires in every part of the forest, and who often, like the Mongalls in the grassy deserts of Asia, set fire to the plains, in order to attract herbivorous animals, by the growth of tender and nutritious herbage which springs up soon after the burning, it is easy to see these annual conflagrations could not fail to happen.

In the Autumn of 1819, the burnings, owing to the unusual drought, continued until very late in the season; so that the weeds in the low grounds were consumed, to the manifest injury of the forests. Large bodies of timber are so frequently destroyed in this way, that the appearance has become familiar to hunters and travellers, and has received the name of *deadening*.

After the burning of the grass in the open prairies, the wind, which at that season usually blows with great strength from the north-west, carries off the ashes from the general surface into the hollows and small vallies, thus contributing to enrich the latter at the expense of the former.⁵⁵

⁵⁵ See Wells *On the Origin of Prairies*, in the 4th number of Silliman's Journal.—JAMES.

Comment by Ed. "La Grande Prairie," as the French settlers of St. Louis called it, began at Fourth Street of the present city.

The prairie appears to have heretofore extended, [95] almost without interruption, for several miles in the rear of St. Louis. The western portions of it are yet naked meadows, without trees or bushes. As we followed the little pathway towards Bon Homme,⁵¹ we passed large tracts to which the labours of the sand rat⁵² had given the

⁵¹ Bonhomme (Good Man) is the name of a creek, a township, and a post-office in St. Louis County, but has never been the name of a town. The post-office of Bonhomme is of comparatively recent origin, and even now contains but one store. The name as used in the text apparently applies collectively to the settlements along Bonhomme Creek.—Ed.

⁵² Genus *Pseudostoma*.^{*} SAY.—Cheek-pouches exterior to the mouth; incisores naked, truncated; molares sixteen, destitute of radicles; crown simple, oval; anterior ones double.

Species, *Pseudostoma bursaria*.—Body sub-cylindrical, covered with reddish-brown hair, which is plumbeous at base; feet white, anterior nails elongated, posterior ones short, and concave beneath.

Mus bursarius, (Shaw, Trans. Lin. Soc. Lond. and Genl. Zoology.) — Body elongated, sub-cylindrical; hair reddish-brown, plumbeous at base; beneath rather paler; cheek-pouches capacious, covered with hair both within and without; vibrissæ numerous, slender, whitish; eyes black; ears hardly prominent; feet five-toed, white, anterior pair robust, with large, elongated, somewhat compressed nails, exposing the bone on the inner side, middle nail much longest, then the fourth, then the second, then the fifth, the first being very short; posterior feet slender, nails concave beneath, rounded at tip, the exterior one very small; tail short, hairy at base, nearly naked towards the tip.

This animal is congeneric with the Tucan of Hernandez, which Buffon erroneously considers the same as the *Talpa rubra Americana* of Seba, or *Talpa rubra*, Lin., an animal which is, however, entirely out of the question, and which, if we may be allowed to judge from Seba's figure, is so far from having any specific affinity with the *bursarius*, that it cannot now be regarded as co-ordinate with it.

The late professor B. S. Barton, in his Medical and Physical Journal, says, that a species of *Mus* allied to the *M. bursarius* of Shaw, is common in Georgia and Florida; that he examined a living specimen of this animal, and was convinced that it is no other than the Tucan of Hernandez, and the Tuza or Tozan of Clavigero. He says nothing of its size; but on the same page he remarks, "that another species of *Mus*, much larger [than] the Tuza, inhabits west of the Mississippi about latitude 30°, of which very little is known." Dr. Barton was aware that the cheek pouches, in the figures given by Shaw, are represented in an inverted position, but not having seen specimens from the trans-Mississippi country, he was unacquainted with their specific identity with those of Canada,

^{*} From *ψευδω*, false, and *στομα*, a mouth, in allusion to the false mouths or cheek-pouches.

aspect of a ploughed field. From the great quantities of fresh earth recently brought up, we perceived the little

from which those figures were drawn. In our zoological reports to Major Long, in the year 1819, the specimens which we found on the Missouri were recorded under the name of *bursarius* of Shaw. Coxe, in his description of "Carolana called Florida, and of the Meschacebe," 1741, mentions a "rat with a bag under its throat, wherein it conveys its young when forced to fly."

Several other writers have noticed these animals, of whom Dr. Mitchell, in Silliman's Journal, 1821, mentions the identity of specimens obtained beyond Lake Superior, with the *M. bursarius* of Shaw.

The animals belonging to this genus are distinguished by their voluminous cheek-pouches, which are perfectly exterior to the mouth, from which they are separated by the common integument, they are profoundly concave, opening downwards, and towards the mouth.

The *incisores* which are not covered by the lips, but are always exposed to view, are strong and truncated in their entire width at tip; the superior ones are each marked by a deep, longitudinal groove near the middle, and by a smaller one at the inner margin. The *molares*, to the number of eight in each jaw, penetrate to the base of their respective alveoles, without any division into roots, as in the genus *Arvicola*, *Lepus*, &c., their crown is simply discoidal, transversely oblong oval, margined by the enamel, and in general form they resemble the teeth of a *Lepus*, but without the appearance either of a groove at their ends, or of a dividing crest of enamel; the posterior tooth is rather more rounded than the others, and that of the upper-jaw has a small prominent angle on its posterior face; the anterior tooth is double, in consequence of a profound duplicature in its side, so that its crown presents two oval disks, of which the anterior one is smaller, and in the lower jaw somewhat angulated. All the molares of the lower jaw incline obliquely forward, and those of the superior jaw obliquely backward.

The whole animal has a clumsy aspect, having a large head and body, with short legs, large fore feet, and small hind feet; and although it walks awkwardly, yet it burrows with the greatest rapidity, so that the difficulty of obtaining specimens may be, in a great degree, attributed to the facility with which the animal passes through the soil, in removing from the vicinity of danger.

They cast up mounds of loose earth, which, like those of the *blind rat*, (*Spalax typhlus*) have no exterior opening. These elevations have been aptly compared, by Lewis and Clarke, to such heaps of earth as would be formed by the emptying of the loose contents of a flower-pot upon the soil. The mounds are of various dimensions, from the diameter of a few inches only, to that of several yards; the quantity of earth employed consequently varies from a pint to two or three bushels.

So entirely subterranean is the life of this animal, that it is rarely seen; and many persons have lived for many years surrounded by their little edifices, without knowing the singular being by whose labours they are produced.

It is known by the names of *sand-rat*, *gopher*, *pouched-rat*, *salamander*, &c.
— JAMES.

animals were engaged in enlarging their subterranean excavations; and we watched long, though in vain, expecting to see them emerge from their burrows. It is probable the jarring of the earth under the hoofs of our horses, by giving early notice of our approach, prevented them from appearing at the surface.

In our way we passed the large hepatic spring visited by Mr. Jessup, and described in his report. It rises in the bed of a large brook, and diffuses a strong sulphurous odour, perceptible at a distance of one hundred yards. It probably derives its mineral impregnation from some decomposition in the alluvial substances through which it rises to the surface.

Eight or ten miles west of St. Louis, forests of oak and hickory begin to occur, and become more frequent towards Chesterfield and Bon Homme.²² At evening we descended into the deep cotton-wood forests of the Missouri bottom, and a little before sunset arrived on the bank of that majestic river. Here we were politely received and entertained in the house of a gentleman formerly of New York. A large and splendid collection of books, several articles of costly furniture, and above all, manners and conversation like those of the better classes in our cities, formed here a striking contrast to the rude and solitary cabin, and the wild features of nature, in a spot where the labours of men had as yet produced scarce a perceptible change.

On the ensuing morning, May 5th, we crossed the Missouri above Bon Homme. The forests on the [96] north side of the Missouri were here narrow, and confined principally to the vallies.

Pond Fort, where we halted to dine, was at this time

²² Chesterfield was situated on Bonhomme Creek, one mile from the Missouri River. It was laid out in 1818.—ED.

the residence of a single family. In the late war, the inhabitants of the surrounding country had collected their families and their cattle at this place, building their temporary residences in the form of a hollow square, within which their cattle and horses were enclosed at night.⁴⁴

In the pond, which lies along the north side of the fort, the nelumbium was growing in great perfection. Its broad orbicular leaves are somewhat raised from the water, almost concealing its surface. Its showy yellow flower, when fully expanded, is larger, as remarked by Nuttall, than that of any other plant indigenous to the United States, except the *magnolia macrophylla*. The nuts, of which there are several immersed in the receptacle of each flower, have, when ripe, the size and the general appearance of small acorns, but are much more palatable. The large farinaceous root is sometimes used by the Indians as an article of diet, as are also the nuts.

Our path lay through extensive and fertile meadows, stretching away to the distant horizon, and bounded sometimes by the verge of the sky, and sometimes by the margin of a forest. The elk, the deer, and the bison, the indigenous inhabitants of these delightful meadows, had been long since driven away by the incursions of the white settlers, scattered at remote intervals on the borders of the forests. The dense and uniform growth of grass had risen untrodden and uncropped, and was now waving with ceaseless undulations, as the wind swept lightly over the surface of the plain. The slender and graceful

⁴⁴ Pond Fort was one of a half dozen posts erected by the settlers of St. Charles County during the War of 1812-15, for protection against the Indians. Boone's Fort, built by a son of Daniel Boone, was the largest and strongest of the group. Pond Fort was a short distance southeast of the site of Wentzville.—ED.

panicles of the *heuchera americana*, rising above the grass, resembled a grove of spears, bristling above the heads of an embattled host. Along the margins of the brooks, we noticed the beautiful *spiræa opulifolia*, and a slender species of [97] *viburnum*, bending under their clusters of snowy flowers.

Through the day, the weather had been fine but warm. At sunset a thunder-storm rose in the west; and the day was succeeded, almost without any interval of twilight, by the most impenetrable darkness. The wind soon rose to a tempest; and hailstones of uncommon magnitude began to fall, accompanied with thunder and lightning. Our first thought was to dismount from our horses, and shelter ourselves from the hail on the leeward side of their bodies. We were in the middle of an extensive prairie, where no other protection could be looked for. The hailstones, however, diminished in size, and soon ceased to fall; but such torrents of rain ensued, that the plain became inundated, and the frequent flashes of lightning were reflected to our eyes from the surface of a vast lake. The plains in many places having little inclination, the water of a sudden shower is drained off less rapidly than it falls. After raging with great violence for a short time, the storm ceased; but the darkness was so intense, that we did not arrive at the settlement, where we proposed to lodge, until a late hour in the night.

Soon after crossing the Missouri, we had ascended so far as to reach the general level of the great woodless plain; and after travelling a few miles, we found the surface sloping to the north-east towards the Mississippi. In the afternoon, we crossed the Darden, which enters the Mississippi eight miles above the mouth of the Illinois; and on the following morning the Cuivre, tributary to

the same river, ten miles above the other.⁴⁸ The point between the Missouri and Mississippi, near their confluence, is raised in the highest parts, probably less than one hundred and fifty feet above the water-table. It is of a deep and fine soil, which would appear rather to have subsided from the waters of a quiet ocean, than to have been brought down from above, and deposited [98] in its present situation by the rivers. Between the sources of the streams which descend from either side of this narrow cape, extends an irregular tongue of land, destitute of timber, and every where nearly of the same elevation; as if it had been a part of the great plain, left naked at the retiring of the ocean, and in which the vast vallies of the Missouri and Mississippi had since been excavated by the operations of those streams. The smaller rivers of this region appear, both in extent and direction, to have been wholly independent of any peculiar conformation of the original surface on which they commenced their course; and their present beds gradually deepening, and descending in the nearest direction towards the vallies of the great rivers, are in every respect such as we may suppose to have resulted from the wearing away of a great and uniform plain. At a house where we rested in the middle of the day, and which was in the highest part of the country between the Missouri and Mississippi, here sixty miles distant from each other, a well had been sunk sixty-five feet without finding water. This well passes through several strata of loam, clay, and sand; then through a narrow horizontal bed, of that peculiar substance called chalk, by Mr. Schoolcraft;⁴⁹ which is here

⁴⁸ On Dardenne Creek, see preceding volume, note 97.

The Cuivre (Copper) River forms part of the northern boundary of St. Charles County.—Ed.

⁴⁹ Views of the Lead Mines, pp. 180.227.—JAMES.

intermixed with numerous angular fragments of flints, and terminates at the surface of a stratum of blue compact limestone, abounding in organic remains. We were informed, that among other things brought up from this well, were masses of carbonized wood, bearing the marks of the axe; but as these could not be found, we thought it reasonable to attribute some part of the account to the active imagination of the narrator.

From the *divide* at the sources of the Cuivre, we overlooked an extensive tract of undulating meadow; and could distinguish on the distant horizon, the wide valley, and the extensive forests of Loutre lick.⁸⁷

[99] This stream is the first deserving notice, which enters the Missouri from the north. Its sources are several miles to the north-west of those of the Cuivre. In its valley the rocky substrata of the plain are exposed, for an extent of many miles. Near Van Babber's,⁸⁸ where we arrived a little before sunset on the 6th, there is, in the middle of the creek, a large brine spring. Over this has been placed a section of the hollow trunk of a tree, to prevent the intermixture of the fresh water of the creek.

The sandstone, from which this spring issues, is granulated and glimmering, like that about the old lead mines

⁸⁷ The Loutre is a Montgomery County stream.— Ed.

⁸⁸ The correct name of this man was Isaac Van Bibber. His father was killed at the Battle of Point Pleasant (see Bradbury's *Travels*, in our volume v, note 156); he was brought up in Daniel Boone's family, and married Elizabeth Hays, daughter of Boone's eldest daughter, Susan. Emigrating to Missouri in 1800, he served during the War of 1812-15 as major of militia. In the autumn of 1815 he settled at the place called Loutre Lick, on the site of the present village of Mineola, Montgomery County, and a considerable immigration followed. A man named Massey had attempted a settlement even earlier, but from fear of the Indians had retreated. The settlement was sometimes called Van Bibber's Lick. An effort was made to utilize the spring in the manufacture of salt, but the brine proved too weak to yield profitably.— Ed.

of St. Michael.²² Like that, it is in horizontal strata, and exhibits sufficient evidence of being a continuation of the same stratum. Perceiving the same indications of fossil coal, lead, and other minerals here, as were known to exist in the same range of country on the other side of the Missouri, we listened with a credulity which seemed rather to disappoint and surprise our host, to his account of the phenomena that had appeared from time to time in his neighbourhood. The combustion of a coalbed, or the decomposition of a mass of pyrites, has, we believe, given rise to many more astonishing stories than he related.

He gave an account of several luminous appearances that had been seen at the breaking up of winter, or in unusually rainy seasons, or at other times of the year. These had been witnessed by many persons of unquestionable veracity; but so great had been their terror on the occasion, that they could never afterwards recollect the precise spot where the light had appeared to them. He told us of two itinerant preachers, who had encountered an indescribable phenomenon, at a place about nine miles east of Loutre lick. As they were riding side by side at a late hour in the evening, one of them requested the other to observe a ball of fire attached [100] to the end of his whip. No sooner was his attention directed to this object, than a similar one began to appear on the other end of the whip. In a moment afterwards, their

²² The old mining district in Madison County, Missouri, centered around the town of Mine la Motte, named for the Frenchman who discovered the deposits. Mine la Motte was settled as early as 1722; its site is about four miles north of Fredericktown. St. Michael was settled in 1801, by immigrants from North Carolina, Tennessee, Kentucky, and Virginia, and in 1822 contained fifty dwellings; then it declined and almost disappeared. Its site is on the north bank of Saline Creek, opposite Fredericktown.—Ed.

horses and all objects near them were enveloped in wreaths of flame. By this time the minds of the itinerant preachers were so much confounded, that they were no longer capable of observation, and could therefore give no further account of what happened. He also stated as a fact, authenticated by many credible witnesses, that a very considerable tract of land near by, had been seen to send up vast volumes of smoke, which rose through the light and porous soil, like the smoke through the covering of a coal-pit. This had in one instance been witnessed by a son of the celebrated Col. Boon, and was at first mistaken for a prairie on fire. This phenomenon also occurs at the breaking up of winter, or at such seasons as the earth is drenched by uncommon quantities of rain.

Within a few miles of the lick, are eight or nine rude furnaces, disposed in the direction of a straight line, extending about two miles. He stated, that it was not known by whom, or when they were built, nor could it be ascertained for what purpose. It was evident they had been used; but no slag cinders or any thing of the kind had ever been found, nor was it possible to conjecture for what purpose the furnaces had been constructed. We regarded all these accounts, and many others of a similar character, as a sort of traditionary evidence of the accidental discovery, at some former time, of lead, coal, or pyrites; and that this discovery, by the ignorance and credulity of the people, had been magnified into an object, to which they had at length learned to ascribe a mysterious and indefinite importance.

Immediately about Loutre lick the surface was rocky and uneven; low cliffs of light gray sandstone, fringed with tufts of the dark green *pteris atropurpurea*, and the black stiped *asplenium*, overhung [101] the margin of

the brook, where the inconspicuous flowers of the *prinos lævigatus* and *zanthoxylon fraxineum*, and the blue spikes of the *amorpha fruticosa*, were just expanding.

Beyond Loutre lick the road traverses longitudinally that great woodless plain, thirty miles in length, called the Grand Prairie. It varies in width from one to ten or fifteen miles. The soil is deep and fertile, closely covered with grasses, interspersed with a proportion of gaudy *euchromias* and *lichnedias*, with the purple and yellow *pedicularia*, the *tradescantia*, and many beautiful *astragali*.

At Thrall's settlement,⁸⁰ sixty miles above Loutre lick, the *floerkea proserpinacoides*⁸¹ is found in great abundance in open fields and by the road side, reclining its flexile and delicate stem upon the species of *bidens*, *polygonum*, &c. common in such situations. It grows much larger here than at Albany, the only locality where we have met with it east of the Mississippi; and its leaves, instead of being quinate, are usually composed of six leaflets. In neither place does it show any preference to marshy grounds, as the newly-proposed name, *palustris*, would seem to imply. Our course, inclining considerably towards the Missouri, made it necessary to leave the elevated region of the plains, and betake ourselves to the forests, soon after passing the Grand Prairie. In these forests the linden, the hop-horn beam, maple, beech, and ash, attain an uncommon magnitude. The blue beech (*ostrea virginica*) sometimes occurs, and is of a larger growth than in New England.

⁸⁰ Thrall's settlement was about four miles north of Rocheport, Boone County. The first settlers arrived as early as 1812, and after the War of 1812-15 the population grew rapidly. Augustus Thrall, for whom the place was named, came in 1816. The site was on land granted by the federal government to sufferers from the New Madrid earthquake.—ED.

⁸¹ Willdenow. *F. palustris*. Nuttall.—JAMES.

Extensive and very accessible beds of coal have been opened near Thrall's plantation. The inhabitants assert that, in sinking wells, the trunks of large trees have been met with at a great depth below the surface. We could, however, discover no satisfactory [102] confirmation of this statement. The soil appeared to us to exhibit no evidence of having been disturbed at any period since the deposition of the coal beds and the accompanying sandstones.

On the 8th of June we arrived at Franklin. Here we delayed several days, in the expectation of receiving from Washington some further instructions, and the supply of funds necessary for the prosecution of the duties of the expedition. Having anxiously awaited one weekly arrival of the mail, and being disappointed of the expected communications, Major Long resolved to continue the journey, and to proceed in the accomplishment of the services assigned him, as far as the means then at his command would allow. As the great part of our proposed route to Council Bluff lay through the wilderness, we now thought it necessary to procure two horses, in addition to those we already had; one of them to be loaded with provisions, and the other for the use of a man whom we had engaged to accompany us.

We left Franklin on the 14th; and proceeding by a rugged and circuitous road across a tract of hilly forests, arrived at Charaton the same evening.

From Charaton to the mouth of Grand river,²² *the trace*, as the paths are here called, passes through a tract of low alluvial lands, partly covered with forests, but all extremely

²² For Franklin and Chariton, see the preceding volume, notes 116, 122. Grand River is a considerable affluent of the Missouri; it rises in southern Iowa and flows southeasterly; its lower course forms the boundary between Chariton and Carroll counties, Missouri.—ED.

fertile. Here we were to take leave of the settlements, and to pursue the remainder of our journey through the wilderness; after dining in the cabin of a settler, we crossed Grand river, and betook ourselves to the course we thought proper to pursue, through a tangled and pathless forest. This brought us, after a few hours, to the border of an extensive plain. Our horses, somewhat unaccustomed to travelling in woods, and particularly the pack-horse, being young and untutored, gave us much trouble.

After ascending into the prairie, as the night came on, we were compelled to go a mile or two off [103] from our course, in search of water and wood for our encampment; at length finding a suitable place on the bank of a small stream, called Doe creek, discharging into Grand river, we kindled a fire, cooked, and ate our supper of bacon, pilot-bread, and coffee; and as we had no tent, spread our blankets under the shelter of a large tree, and laid ourselves down to rest. The hooting of owls, together with the howling of wolves, and the cries of other nocturnal animals, as we were yet unaccustomed to them, occasionally interrupted our slumbers. On the following morning, however, we found ourselves well refreshed, and were prepared to resume our journey at an early hour.

The road known by the name of Field's trace ascends from Charaton on the east side of Grand river about sixty miles, thence running nearly north-west through the immense plains of the Little Platte, the Nishnebottona, and the Mosquito river, to Council Bluff. At the mouth of Grand river we had learned that the eastern tributaries of that stream were much swollen, and were therefore difficult to cross; accordingly, we determined to ascend

along the ridge between that river and the Little Platte, until we should fall in with the trace.

We were detained several hours in searching for a place where we might cross Doe creek. Though a very inconsiderable stream, its steep muddy banks were now almost filled, by the reflux occasioned by the freshet in the Missouri. It was not without great difficulty we at length effected a passage, at a point three miles distant from our encampment; thence directing our course by the compass, we travelled north, 45° west, twenty-two miles. In this distance we crossed three large creeks; two of them running eastward into Grand river, the other westward to the Wahconda.*

In the plains we met with nothing to obstruct travelling. They had been perfectly denudated by [104] the burning of the last season; and the annual growth of grasses and weeds had as yet risen but about a foot from the ground. Among the grasses are intermixed great numbers of the

* The text does not make clear the route of the party through Carroll County, especially as Doe Creek cannot be identified. If this stream was a tributary of Grand River, the party could not have crossed a branch of the Wahconda in a course north, 45° west; for Big Creek, a tributary of the Grand, which flows southeasterly through the eastern half of the county, would have separated them from the Wahconda basin. It seems likely that they ascended the watershed between Big Creek and the Wahconda, and that Doe Creek was a small branch of the former. The two tributaries of the Grand which were crossed may have been Big Creek and one of its large branches, probably the Little Wahconda, which flows south through the centre of the county. The journey of twenty-two miles must have brought them near the northern line of Carroll County.

Wahconda (sometimes Wakanda and Wakenda) is, as the text has explained, the Indian name for the supreme being (Master of Life). The stream pursues an eastward course across Carroll County. Its waters abounded in fish and its banks in game; to the Indians such abundance seemed to betoken the presence of the deity, and the stream was regarded as sacred. Another legend concerning the name is, that two Sioux died while passing a night upon its bank, and as they bore no marks of violence, the Indians attributed their death to the Master of Life.—ED.

legumina, with pinnated leaves; and these are so commonly canescent as to give their peculiar silvery colour to the whole plain. This effect is the more striking, when a slight breeze agitates the leaves of the numerous species of astragalus, psoralea, baptisia, and the beautiful amorpha canescens, all of which have their inferior surfaces beset with a shining silk-like down.

In the afternoon of the 14th a storm of rain commenced, which continued with little intermission for several days. Having no tent, we were much exposed to the weather; but at night we constructed a partial shelter, by stretching our blankets over the spot on which we lay down to rest.

As we approached the sources of Grand river, the country became more hilly. Horizontal limestone, like that about St. Louis, appears in the sides of the deep vallies.

In the scanty soils along these declivities the ferula foeniculacea sometimes occurs, diffusing its powerful and peculiar odour, perceptible after a shower at the distance of several rods.

18th. The rain of the preceding day continued with increased violence during the night. Our encampment was completely inundated, and the wind so high as to render our blanket-tent wholly useless. The small portfolio, in which we had deposited such plants as we wished to preserve, had been placed for a pillow in the most sheltered part of the tent, and covered with a coat; but these precautions, and all others we could adopt, were unavailing; and the collection of plants we had then made was lost.

Wishing to deviate as little as possible from the course we had assumed, and which we knew it was necessary to pursue, if we would follow the most [105] direct route to

Council Bluff, we descended on the 19th, into a broad and densely wooded valley on our left. After crossing a part of this valley, through heavy forests of ash, sycamore, and cotton-wood, our progress was checked by a river of some magnitude, and so swollen and turbulent in consequence of the late rains, that we thought it advisable not to attempt the passage. We therefore relinquished our course; and being a long time detained in painful and fatiguing exertions to extricate ourselves from the forest, regained towards evening the open plain, and encamped.

We had now ascended about eighty miles from the mouth of Grand river. The country we had passed is fertile, and presents such an intermixture of forests and grassy plains, as is extremely pleasing to the eye. Towards the north the hills became gradually more and more elevated. The discontinuance of the horizontal limestone, the disclosure in the deep vallies of the more ancient varieties of sandstone, and the frequent occurrence in the soil of small round masses of granite, gneiss, and other primitive rocks, indicate an approach towards the margin of the secondary basin. In the deepest vallies, about the sources of Grand river, we observe a very hard semi-crystalline sandstone, in rather indistinct strata, and containing apparently few remains either of plants or animals. It is, in almost every respect, similar to that sandstone, which, in the valley of Lake Champlain, rests along the skirts of the granitic mountains of Ticonderoga, Crown Point, and Westport, and supports there a small stratum of compact limestone. Containing few fragments rounded by attrition, being almost destitute of cement, and retaining much uniformity of character in different localities, it has a manifest resemblance to that most ancient of sandstones, which, in the

mountains of New England, is associated with the granular limestone, and has sometimes been called [106] granular quartz.⁶⁴ Indeed we have no hesitation in believing, that at some point near the sources of the De Moyon and Grand river, the primitive rocks approach near the surface. There is here a stratum of newer sandstone, superimposed upon that above noticed, and bearing marks of having been contemporaneous to some formation of coal; but it is not of sufficient thickness, in the parts we examined, to justify an opinion, that it contains any valuable beds of that mineral. Leaving the immediate neighbourhood of the river, there is an ascent of several miles to the level of the great woodless plain. The bottom, and part of the sides of the vallies, are covered with trees; but in proportion to the elevation, the surface becomes more unvaried and monotonous. These vast plains, in which the eye finds no object to rest upon, are at first seen with surprise and pleasure; but their uniformity at length becomes tiresome.

For a few days the weather had been fine, with cool breezes, and broken flying clouds. The shadows of these coursing rapidly over the plain, seemed to put the whole in motion; and we appeared to ourselves as if riding on the unquiet billows of the ocean. The surface is uniformly of the description, not inaptly called *rolling*, and will certainly bear a comparison to the waves of an agitated sea. The distant shores and promontories of woodland, with here and there an insular grove of trees, rendered the illusion more complete.

The great extent of country contemplated at a single view, and the unvaried sameness of the surface, made our

⁶⁴ Eaton's Index to the Geology of the Northern States. First edition.—JAMES.

prospect seem tedious. We pursued our course during the greater part of the day along the same wide plain, and at evening the woody point in which we had encamped on the preceding night was yet discernible.

[107] Nothing is more difficult than to estimate, by the eye, the distance of objects seen in these plains. A small animal, as a wolf or a turkey, sometimes appears of the magnitude of a horse, on account of an erroneous impression of distance. Three elk, which were the first we had seen, crossed our path at some distance before us. The effect of the *mirage*, together with our indefinite idea of the distance, magnified these animals to a most prodigious size. For a moment we thought we saw the mastodon of America, moving in those vast plains, which seem to have been created for his dwelling place. An animal seen for the first time, or any object with which the eye is unacquainted, usually appears much enlarged, and inaccurate ideas are formed of the magnitude and distance of all the surrounding objects; but if some well-known animal, as a deer or a wolf, comes into the field of vision so near as to be recognized, the illusions vanish, and all things return to their proper dimensions.

Soon after we had left our encampment, on one of the bright sunny mornings which occurred, when we were in the country near the sources of Grand river, we discovered, as we thought, several large animals feeding in the prairie, at the distance of half a mile. These, we believed, could be no other than bison; and after a consultation respecting the best method of surprising them, two of our party dismounted; and creeping with great care and caution, about one-fourth of a mile through the high grass, arrived near the spot, and discovered an old turkey,

with her brood of half-grown young, the only animals now to be seen.

On the evening of the 20th of May, we encamped in a low, muddy bottom, overgrown with nettles and phacelias; but the only place we could find combining the three requisites — grass for our horses, and wood and water for ourselves. Here we were so tormented by the mosquitoes, harassed and goaded by the wood-ticks, [108] that we were glad to seek relief by mounting our horses, at the earliest appearance of light on the following morning. The dew had been so heavy, that it was falling in drops from the grass and weeds where we had lain, and our blankets were dripping as if they had been exposed to a shower. We proceeded on our course about thirty miles, and encamped early in the afternoon. Having ascended Grand river nearly to the point, where we believed Field's trace must cross it, we directed our course more to the west, and had already crossed several streams running to the south, supposed to be the upper branches of the Little Platte.

The utmost uniformity prevails in the appearance of the country about the sources of the Little Platte, Nishnebottona, and other northern tributaries of the Missouri. Near one of these small rivers we discovered the trace of an Indian war party, which appeared to have passed very recently towards the Missouri. After our arrival at Council Bluff, we had farther information of these Indians, who were a war party of Sauks and Foxes from the Mississippi, and had committed many depredations upon the Missouri Indians, and some upon the whites. We were considered very fortunate in not having fallen in with them, as it was believed, they would not have hesitated to rob, and perhaps destroy, any party of whites as weak as ours.

Remains of bisons, as bones, horns, hoofs, and the like, are often seen in these plains; and in one instance, in a low swamp surrounded by forests, we discovered the recent track of a bull; but all the herds of these animals have deserted the country on this side of Council Bluff. The bones of elk and deer are very numerous, particularly about certain places, which, from the great number of tent poles, scaffolds, &c. appear to be old Indian hunting camps; and the living animals are still to be found here in plenty. As we rode along these boundless meadows, [109] every object within several miles became visible; the smallest shrub rising a few inches above the surface of the green expanse, could be seen at a mile distant.* Some large agarics, and a gigantic lycoperdon, peculiar to these regions, are the most conspicuous objects by which the uniformity of the plains is varied; and these may be seen sometimes at the distance of two or three miles.

On the evening of the 24th, we arrived on the bank of a beautiful river, at a grove of ash and cotton-wood trees. We had scarce dismounted from our horses, when a violent thunder-shower commenced; the rain fell in such torrents as to extinguish our fire, and the wind blew so violently that our blanket-tent could afford us no protection. Many large trees were blown down in the point of woods where we lay, and one fell a few yards from our camp. As the night was extremely dark, we thought the danger of moving at least equal to that of remaining where we were; and spent part of the night in the greatest anxiety, listening to the roar of the storm, and the crashing of the timber. As our horses were

* A *ceanothus*, smaller than *C. americana*, the *amorpha canescens*, and the *sympatoria racemosa*, are almost the only shrubs seen in the prairies.— JAMES.

dispersed about the wood, we had scarce a hope they could all escape uninjured.

On the day following, after we had rode about eighteen or twenty miles, we observed the surface of the country to become suddenly hilly; and soon after were surprised by an unexpected view of the wide valley, the green meadows, and the yellow stream of the Missouri. A little after noon we encamped in a meadow on the river bottom, and by ascending one of the neighbouring bluffs; sufficiently elevated to overlook a large extent of the surrounding country, we were enabled to discover that we had arrived at the Missouri, at a point about [110] six miles below the confluence of the great river Platte.

On the precipitous and almost naked argillaceous hills, which here bound the Missouri valley, we found the *oxytropis lambertii*, and the great flowering pentstemon; two plants of singular beauty. Here, also, we saw, for the first time, the leafless *prenanthes*, the yellow *euchromia*, and many other interesting plants. It would seem that several species of plants are distributed along the course of the Missouri, but do not extend far on either side. Probably the seeds of these have been brought down from their original localities, near the sources of the river. That the distribution of plants is sometimes effected in this way, there can be no doubt, as in the instance of the *portulacca*, with pilose leaves,* and other natives of the high and sandy plains of the Arkansa, which are sometimes found transplanted into the deep forests and fertile soils of the hilly region; but the agency of rivers in this respect appears much less important, than without particular examination, we might be inclined to imagine. In

* Nuttall's Travels into Arkansa, p. 165.— JAMES.

Comment by Ed. See reprint in our volume xiii, pp. 227-228.

ascending the Missouri, the Arkansa, or any great river, every remove of forty or fifty miles brings the traveller to the locality of some plants, not to be seen below. This is perhaps less the case with rivers running from east to west, or from west to east, than with those whose course in a different direction, traverses several parallels of latitude.

On the 27th, we swam across Mosquito Creek;⁹⁷ and after a ride of near thirty miles along the Missouri bottoms, encamped near the mouth of the Boyer,⁹⁸ about six miles from the wintering place of the party. Early on the following morning we left our encampment, and were soon after cheered by the report of guns discharging at the Cantonment. The sight of the trading establishment, called Fort Lisa, gave us [111] more pleasure than can easily be imagined, except by those who have made journeys similar to ours, and have felt the deprivation of all those enjoyments which belongs to the habitations of men. At ten A. M. we arrived at the Boyer, which Major Long immediately crossed on a small raft, leaving Captain Bell and Dr. James, with the horses and baggage, to wait until some soldiers could be sent out to assist in crossing. These arrived in a few hours; and before three o'clock we had crossed the Boyer and the Missouri, and found ourselves surrounded by our friends at Engineer Cantonment.

In the early part of June, 1820, arrangements were completed for the departure of the Exploring Expedition from their winter cantonment near Council Bluff. By an order of the Honourable Secretary of War, dated 28th February, Major Long had been instructed to explore

⁹⁷For Mosquito Creek, see preceding volume, note 173.—ED.

⁹⁸See preceding volume, note 174.—ED.

the country from the Missouri westward to the Rocky Mountains; and thence, proceeding southward along the base of these mountains to the Arkansa, to despatch a division of his party down that river. The following orders were issued by Major Long, briefly sketching the proposed route, and assigning appropriate duties to each individual of the party.

“Engineer Cantonment, Council Bluff,

“Orders.

June 1st, 1820.

“Agreeably to the instructions of the Honourable Secretary of War, the further progress of the Exploring Expedition up the Missouri is arrested during the present season. By the same authority, an excursion, by land, to the source of the river Platte, and thence by way of the Arkansa and Red rivers to the Mississippi, is ordered. The expedition will accordingly proceed on this duty as soon as practicable, and be governed by the order of the 31st March, 1819, issued at the United States’ arsenal, near Pittsburgh, so far as it may be applicable. The duties therein assigned to Major Biddle will be performed [112] by Captain J. R. Bell, attached to the expedition by order of the war department, with the exception of those parts which relate to the manners, customs, and traditions of the various savage tribes which we may pass. The duties thus excepted will be performed by Mr. Say. The duties assigned to Dr. Baldwin and Mr. Jessup, by the order alluded to, will be performed by Dr. E. James, employed for these purposes, by the sanction of the secretary of war. In these duties are excepted those parts which relate to comparative anatomy, and the diseases, remedies, &c. known amongst the Indians; which will also be performed by Mr. Say.

"Lieutenant Graham will take charge of the United States' steam-boat, Western Engineer, and proceed down the Missouri to the Mississippi, with the remaining part of the crew originally attached to the boat, on the performance of duties assigned him by special order.

"The detachment from the rifle regiment, attached to the expedition, by order from the commanding officer of the 9th military department, will accompany the expedition in their route from this place to Belle Point, on the Arkansa, under the immediate command of Lieutenant Swift, who will inspect daily their arms and accoutrements, and report their condition to the commanding officer. He will receive such instructions from the commanding officer as occasion may require, in relation to the discharge of his duties.

"Guides, interpreters, hunters, and others attached to the expedition, will perform such duties as may be assigned, from time to time, by the commanding officer.

"The duties of the expedition being arduous, and the objects in view difficult of attainment, the hardships and exposures to be encountered requiring zealous and obstinate perseverance, it is confidently expected, that all embarked in the enterprize will [113] contribute every aid in their power, tending to a successful and speedy termination of the contemplated tour.

"S. H. LONG, *Maj. Engrs.*
Commanding Exploring Expedition."

The party, as now arranged, consisted of the following persons:

S. H. Long, Major, U. S. Topographical Engineers, commanding the expedition.

J. R. Bell, Captain Lt. Artillery, to act as Journalist.**
W. H. Swift, assistant Topographer, commanding guard.

Thos. Say, Zoologist, &c.

E. James, Botanist, Geologist, and Surgeon.

T. R. Peale, assistant Naturalist.

Saml. Seymour, Landscape Painter.

Stephen Julien, Interpreter, French and Indian.

H. Dougherty, Hunter.

D. Adams, Spanish Interpreter.

Z. Wilson, Baggage Master.

Oakley and Duncan, Engagees.

Corporal Parish, and six privates of the U. S. army.

To these we expected an addition, on our arrival at the Pawnee villages, of two Frenchmen, to serve as guides and interpreters, one of them having already been engaged.

Twenty-eight horses and mules had been provided; one for each individual of the party, and eight for carrying packs. Of these, six were the property of the United States, being furnished by the commanding officer at Camp Missouri; the remaining sixteen were supplied by Major Long, and others of the party. [114] Our saddles and other articles of equipage, were of the rudest kind, being, with a few exceptions, such as we had purchased from the Indians, or constructed ourselves.

Our outfit comprised the following articles of provisions, Indian goods, &c. viz. 150lb. of pork, 500lb. of biscuit, 3 bushels of parched corn meal, 5 gallons of whiskey,

** It will be perceived, that in the following narrative no reference has been made to the notes or journal of Captain Bell, the reason of which is, that his journal, in the form of a report, was submitted to the Secretary of War, and consequently the compiler has had no opportunity of consulting it.— JAMES.

Comment by Ed. Bell's report was never published.

25lb. of coffee, 30lb. of sugar, and a small quantity of salt, 5lb. of vermilion, 2lb. of beads, 2 gross of knives, 1 gross of combs, 1 dozen of fire steels, 300 flints, 1 dozen of gun worms, 2 gross of hawk's bells, 2 dozen of mockasin awls, 1 dozen of scissors, 6 dozen of looking glasses, 30lb. of tobacco, and a few trinkets, 2 axes, several hatchets, forage-bags, canteens, bullet-pouches, powder-horns, tin cannisters, skin canoes, packing-skins, pack cords, and some small packing-boxes for insects, &c.

The gentlemen of the party were supplied with such instruments as were deemed indispensably requisite in their several pursuits. The instruments for topographical purposes were, three travelling, and several pocket compasses; one sextant, with radius of five inches; one snuff-box sextant; one portable horizon with glass frame and mercurial trough; one and a half pounds of mercury, in a case of box-wood; two small thermometers; several blank books, portfolios, &c.

The hunters, interpreters, and attendants, were furnished with rifles or muskets; the soldiers were armed exclusively with rifles, and suitably equipped. Our stock of ammunition amounted in all to about 30 pounds of powder, 20 pounds of balls, and 40 pounds of lead, with a plentiful supply of flints, and some small shot.

Several of the Indians about Council Bluff, to whom our proposed route had been explained, and who had witnessed our preparations, affected to laugh at our temerity, in attempting what they said we should never be able to accomplish. They represented some [115] part of the country, through which we intended to travel, as so entirely destitute of water and grass, that neither ourselves nor our horses could be subsisted while passing it.

Baron Vasquez,⁷⁰ who accompanied Captain Pike, in his expedition to the sources of the Arkansa, assured us there was no probability we could avoid the attacks of hostile Indians, who infested every part of the country. The assault which had been recently made by a party of the Sauks and Foxes, upon a trading boat belonging to Messrs. Pratte⁷¹ and Vasquez, on the Missouri, above Council Bluff, in which one man was killed, and several wounded, had at this time spread considerable terror among those in any degree exposed to the hostilities of the Indians.

With these prospects, and with the very inadequate outfit above described, which was the utmost our united means enabled us to furnish, we departed from Engineer Cantonment, at 11 o'clock, on the 6th of June.⁷²

The path leading to the Pawnee villages runs in a direction a little south of west from the cantonment, and lies across a tract of high and barren prairie for the first ten miles. At this distance it crosses the Papillon, or

⁷⁰ A. F. Baronet Vasquez accompanied Pike as interpreter. He was the fifth child of Benito Vasquez, a Spaniard, who came to St. Louis in 1770, at the age of twenty, in the capacity of a subordinate military officer. His mother, Julia Papin, was a French Canadian, daughter of Pierre Papin. Baronet Vasquez, born in 1783, was in 1808 appointed ensign in the United States army; he left the service in 1814, at which time he was a first lieutenant of infantry. Pike usually calls Vasquez "Baroney," and his name is so given in the army registers.—ED.

⁷¹ Bernard Pratte was engaged in the fur-trade for many years, yet available information concerning him is scanty. When Astor retired from the American Fur Company (1834), the business of its Western Department was sold to the St. Louis firm of Pratte, Chouteau and Co. Pratte withdrew in 1838, but in 1842 reappeared as the head of the rival firm of Pratte, Cabanne and Co. In 1819, Pratte and Vasquez had a post above Council Bluffs, perhaps nearly opposite the site of the present town of Onawa, Iowa. See Chittenden, *American Fur Trade*, pp. 364, 366, 367, 951. The Vasquez associated with Pratte was a brother of "Baroney," probably Benito, Jr.—ED.

⁷² The route followed by the expedition, from Missouri River to the site of Denver, became later the well-known route of the overland stage, and is now essentially the line of the Union Pacific Railroad.—ED.

Butterfly creek, a small stream discharging into the Missouri three miles above the confluence of the Platte. Lieutenant Graham and Mr. J. Dougherty accompanied us about five miles on our way; we were also met by Lieutenant Talcott from Camp Missouri, who crossed the bluffs on foot, to take leave of us. Much delay was occasioned, as we passed along, by the derangement of the packs, the obstinacy of the mules, and the want of dexterity and experience in our engagees; we however arrived early in the afternoon at the Papillon, where we encamped.

The Papillon, although it traverses a considerable extent of country, was at this time but a trifling stream. Its channel is narrow, the banks steep, and [116] like many other streams which have their whole course in these arid plains, it is nearly destitute of water, except in rainy seasons.⁷³

During the night some rain fell, but as we were furnished with three tents, sufficiently large to shelter all our party, we experienced little inconvenience from the storm. Our baggage was also effectually protected, being laid in heaps, and covered with bear-skins; which were also spread over it when placed upon the pack-horses, during our march by day.

We had each two small blankets, which were carried upon our horses, one being placed under the saddle, and the other upon it. These, with the addition, in some instances, of a great coat, or a blanket-capot, and a valise or a pair of holsters, to supply the place of a pillow, were our only articles of bedding.

On morning of the 7th, a new disposition was made, in relation to the pack-horses, a man being appointed to

⁷³ For Papillon Creek, see Bradbury's *Travels*, in our volume v, note 40.—ED.

attend particularly to each. We breakfasted, and recommenced our journey at an early hour, and moving forward at an easy pace, arrived about ten o'clock at the Elk-horn,⁷⁴ a considerable river, tributary to the Platte. On the preceding evening, we had been joined at our camp by a party of three or four Frenchmen, on their way to a hunting camp of the Omawhaws to trade. We purchased of them two small brass kettles, to complete our supply of camp furniture. One of these men had been of Pratte and Vasquez's party, at the time of the late attack, and had received, in that affair, a wound in the back from a rifle ball, which was yet unhealed. In the morning they accompanied us to the Elk-horn, where the wounded Frenchman was one of the first to strip and plunge into the river. Surprising accounts are given of the hardihood, and patience under suffering, manifested by the Indians; but we have rarely seen one of them [117] exhibit a more striking instance of insensibility to pain, than this Frenchman.

The Elk-horn, called Wa-ta-tung-ya by the Otoes, is, where we crossed it, about thirty yards wide, and during a great part of the year, too deep and rapid to admit of being forded. At this time our horses were barely able to keep their feet, in crossing the deepest part of the channel. Our heavy baggage was ferried across in a portable canoe, consisting of a single bison hide, which we carried constantly with us. Its construction is extremely simple; the margin of the hide being pierced with several small holes, admits a cord, by which it is drawn into the form of shallow basin. This is placed upon the water, and is kept sufficiently distended by the baggage which it receives; it is then towed or pushed

⁷⁴ See preceding volume, note 182.—ED.

across. A canoe of this kind will carry from four to five hundred pounds. The squaws, who are exceedingly expert in this sort of navigation, transport not only their baggage, but their children, and sometimes adults, across large rivers, in these canoes, and with the most perfect safety. They place their children on the baggage, and convey the whole across the stream, by swimming themselves, and urging their charge before them to the opposite shore. It is rare that any unpleasant accident occurs in this primitive mode of ferrying.⁷⁵ The Elk-horn enters the Platte about fifty miles above the confluence of that river and the Missouri. Its whole course is through a country nearly destitute of timber. The low plains [118] which extend along its bank have a fertile soil; but the want of timber opposes a serious obstacle to their settlement.

The soil and climate here are so entirely similar to those of the country about Grand river and the Little Platte, already described, that no change in the vegetable productions could be expected. A species of onion, with a root about as large as an ounce ball, and bearing a conspicuous umbel of purple flowers, is very abundant about the streams, and furnished a valuable addition to our bill of fare.

Soon after crossing the Elk-horn we entered the valley of the Platte, which presented the view of an unvaried

⁷⁵ In Father Venegas' account of California, published at Madrid in 1758, we find a description of a similar method of transportation, used by the natives of that country. "The inhabitants of the banks of the Colorado make of the same herbs (a vine called Pita,) little tubs or bins, called Coritas, which generally hold about two bushels of maize; and in these they transport their goods from one shore to the other, without being in the least damaged by the water, they themselves swimming behind, and shoving these vehicles along before them." Vol. i. p. 44. London, 1759.—JAMES.

Comment by Ed. See preceding volume, note 44, for sketch of Venegas.

plain, from three to eight miles in width, and extending more than one hundred miles along that river, being a vast expanse of prairie, or natural meadow, without a hill or other inequality of surface, and with scarce a tree or a shrub to be seen upon it. The woodlands, occupying the islands in the Platte, bound it on one side; the river-hills, low and gently sloped, terminate it on the other.

At about three o'clock, P. M., a party of ten Indians were seen crossing the plain, towards the Platte, at a great distance before us. Soon after we arrived at a small creek, where was some scattered timber: here we determined to halt for the night, being informed by our guide that we would meet with no wood for twenty miles beyond.

As Indians had been seen in the afternoon, and we were aware of their being still in our neighbourhood, it was thought proper to stake the horses as near as possible to the camp, and to station two sentinels, who were to be relieved during the night.

In our encampment we observed the following order. The three tents were pitched in a right line, all fronting in the same direction. In advance of these, at the distance of four feet, our baggage was arranged in six heaps, one at the right, and one at the left of the entrance to each tent, and protected from [119] the weather by bearskins thrown over them. This disposition was made, not only for the convenience of the party, but that our baggage, in case of an attack of the Indians, might serve as a kind of breast-work, behind which we might be, in some measure, sheltered from danger. At any rate, having our baggage thus arranged, we should know where to find it, and where to rally, in any emergency by day or night.

On the ensuing morning, (8th,) we continued our jour-

ney along the north side of the valley of the Platte, at the distance of four or five miles from the river, the direction of our course south, 85° west, which we followed near twenty miles.

In all our marches we observed the following order. Capt. Bell, mounted on a horse whose gait was regular and uniform, and well calculated for the estimation of distances, preceded the party, attended by our guide.—The soldiers and attendants, formed into two squads, for the better management of the pack-horses, followed in single file.—The scientific gentlemen occupied any part of the line that best suited their convenience.—Major Long followed in the rear, for the purpose of superintending the readjustment of deranged packs, and urging any disposed to linger, to the observance of a close order of march, a duty attended with no inconsiderable trouble and perplexity. Though our route lay at the distance of several miles from the Platte, we could distinctly see the narrow and interrupted line of timber which grows along its course, and occasionally we had a transient view of the river itself, spreading like an expansive lake, and embosoming innumerable islands. About eighteen miles from our encampment, our course led us into the valley of a small river, called *La petite Coquille* or *Muscleshell Creek*,⁷⁰ which we ascended six miles, not deviating from the course we had taken. In the middle of the day we encountered a violent thunder-storm without dismounting [120] from our horses. The plain about us, for a great distance, was destitute of timber, and so level that our party formed the most prominent object in an extent of several miles. It is not surprising that, in this situation, we were a little startled at seeing the

⁷⁰ See *ante*, note 40.—ED.

lightning strike upon the ground at the distance of two hundred yards from us. We could not have been deceived, in relation to this appearance, as we distinctly saw the water and mud thrown several feet into the air by the shock. The storm was so violent that, notwithstanding all our care, we could not prevent our baggage from being wet. We crossed the Coquille six miles above the place where it enters the valley of the Platte. This we effected with some difficulty, the banks being steep and muddy, and immediately afterwards encamped to dry our baggage.

The Coquille is about eight yards across; its bed muddy and the current moderate. Its course is circuitous, traversing some inconsiderable tracts of fertile and well wooded bottom land: in one of these our camp was placed. The night was warm and the mosquitoes swarming in inconceivable multitudes.

Our baggage had been wet on the preceding day, and again by a heavy shower in the night: as the morning was cloudy, we remained in camp for some time, and attempted to dry our clothes and blankets by a large fire. After breakfasting we again got upon our horses, and travelling nearly south-west, arrived in the afternoon at the valley of the Wolf river, or Loup fork of the Platte. This river is called by the Indians the Little Missouri, on account of its resemblance, in the velocity of its current, the turbidness of its waters, and other respects, to that river.

Its sources are in the country of the Poncaras, opposite those of the Quicurre.⁷⁷ Like the Platte, its [121] immediate valley is a broad and woodless plain, almost without

⁷⁷ See Lewis and Clarke, vol. i, p. 67.—JAMES.

Comment by Ed. See *ante*, note 21, for the Quicurre; and preceding volume, note 200, for Loup River.

any perceptible unevenness of surface, and bounded on each side by parallel ranges of low and barren hills.

During our ride, as we were approaching the Loup fork, we met two Pawnee Indians, handsomely mounted, and, as they informed us, on their way to dance the calumet dance with the Omawhaws. We gave them a small quantity of tobacco, and they departed, appearing highly pleased. In the fertile grounds, along the valley of the Loup fork, we observed several plants which we had not before seen: among these was one belonging to the family of the malvaceæ, with a large tuberous root which is soft and edible, being by no means ungrateful to the taste.⁷⁸ We observed also the downy spike of the rabbit's-foot plantain (*plantago lagopus*, Ph.) intermixed with the short grasses of the prairie. The long-flowered puccoon, (*batschia longiflora*, N.) a larger and more beautiful plant than the *B. canescens* is here frequent. As we proceed westward, some changes are observed in the character of the soil and the aspect of vegetation. The larkspurs and lichnedias, (species of *phlox* and *delphinium*, so common and beautiful in all the country between St. Louis and Council Bluff,) are succeeded by several species of milk vetch,⁷⁹ some vicias, and the superb sweet pea (*lathyrus polymorphus*). Every step of our progress to the west brought us upon a less fertile soil. We had as yet seen no game except a few

⁷⁸ This plant is destitute of the exterior calyx of the genus *malva*, to which, however, it is more closely allied than to *sida*, into which it would appear to fall by its artificial characters. It appears to be a congener to the two new plants lately brought by Mr. Nuttall from Arkansas, and which have received the name of *Nuttallia*.— JAMES.

⁷⁹ *Astragalus carnosus*, N. A. *Missouriensis*, N. A. *Lasmani*, Ph.

Gaura coccinea, N. *Troximon marginatum*, Ph. *Hymenopappus tenuifolius*, Ph. *Trichodium laxiflorum*, Mx. *Atheropogon oligostachyum*, N. *Viola palmata*, Ph? in fruit. *Hedeoma hirta*, N. *Hordeum jubatum*, *Anemone tenella*, Ph. and other plants were among our collections of this day.— JAMES.

antelopes, too wild and watchful to be taken without much trouble. In the low prairies we saw several curlews and marbled godwits, with their young; Bartram's sandpiper was also very frequent.

[122] A little before sunset we crossed Grape Creek,⁸⁸ a small and rapid stream of clear water, and soon after arrived at the Loup fork, where we encamped. The banks of this river are of a fine white sand, and are elevated no more than about eight feet above the surface of the stream, at a time of low water. It does not however appear that the low plains, contiguous to the Loup fork, are at any season inundated, the channel being sufficiently wide, and the current rapid enough to discharge all the water, which may at any time be brought down from above.

In the evening, and on the following morning, observations were taken to ascertain the magnetic variation, which was found to be $13\frac{1}{2}^{\circ}$ east.

On the morning of the 10th, we crossed Beaver Creek,⁸⁹ six miles south-west of our encampment. Here we were compelled to carry across our baggage by hand, the creek being too deep and muddy to admit risking it on the pack-horses.

In fording this difficult stream, we had the misfortune to lose an important part of the lock of an air-gun, and as there were no means of replacing the lost article, it was determined to send back the gun from the Pawnee villages by one of the traders, who was soon to return to the Missouri.

While we were encamped at this spot, being detained by

⁸⁸ The description of Grape Creek corresponds to the present Looking Glass Creek, in Platte County. The Pawnee called the stream "water that reflects your shadow." With cultivation of the adjoining lands and the advent of herds of wading cattle, the stream has lost its clearness.—ED.

⁸⁹ For Beaver Creek, see *ante*, note 42.—ED.

a heavy shower, three Frenchmen and two Indians, arrived at the ford, on their way to the Pawnee villages. They told us they had eaten nothing since they left the Missouri. One of the Frenchmen brought a letter from Lieutenant Graham, and a box containing a quantity of vaccine virus, transmitted to the exploring party, for the purpose of introducing vaccination among the Indians. The box alluded to had been sent to the war department, by Mr. Sylvanus Fancher,²² a gentleman in Connecticut, and forwarded to the commanding officer of the expedition. It contained a considerable [123] quantity of virus, carefully enclosed in a variety of packing apparatus, together with instructions relative to the disposition and application of it. But as it was not transmitted till after the departure of the expedition from Pittsburgh, it had been forwarded by mail to St. Louis, whence it was conveyed up the Missouri, by a gentleman of the military expedition, under Colonel Atkinson. Unfortunately, the keel-boat, on board of which it had been deposited, was wrecked in ascending the river, and the box and its contents, although saved from the wreck, was thoroughly drenched, and the virus completely ruined. It was received three or four weeks after the catastrophe just mentioned, and was still drenched with water.

The Frenchmen had, on their way, caught a horse belonging to Mr. J. Dougherty, and intended for the use of

²² Sylvanus Fancher (called "Doctor" by courtesy) was a native of Plymouth, Connecticut. An eccentric, uneducated character, his notoriety was due to the fact that he embraced the vaccine theory before it was adopted by regular physicians. His operations in the unoccupied field of New England were for a few years remunerative; but his improvidence prevented the accumulation of a competence, and as medical men took up the practice of vaccination, his means of livelihood declined. He died in Hartford in abject poverty. See sketch in Anderson, *Town and City of Waterbury, Connecticut* (New Haven, 1896), iii, p. 831.—ED.

his brother, who was of our party. He had escaped several weeks previous, from Engineer Cantonment, and since that time had been wandering in the prairies. This formed a valuable addition to our stock of horses, as a number of them were already unfit for service, on account of sore backs.

The Frenchmen and Indians were supplied with provisions from our packs, and proceeded immediately on their way, intending to reach the Pawnee villages the same evening.

At a late hour in the afternoon we resumed our journey, and at the distance of four miles from Beaver Creek, crossed the Creek of Souls, a small and muddy stream, in which two of the pack-horses fell, again wetting our baggage.

At sunset we arrived at a small creek, eleven miles distant from the village of the Grand Pawnees, where we encamped.²²

On the following morning, having arranged the party according to rank, and given the necessary instructions for the preservation of order, we proceeded forward, and in a short time came in sight of [124] the first of the Pawnee villages. The trace on which we had travelled since we left the Missouri, had the appearance of being more and more frequented as we approached the Pawnee towns;

²² The first creek west of Beaver is Plum, so called from the abundance of wild plums growing on its banks; it is not shown on most maps. The name Creek of Souls is prophetic, as a mission station was established here in 1843. Next to Plum Creek was Council Creek, flowing south through Boone and Nance counties. Its name commemorates an Indian council held there some years later by Dougherty. The names of Plum Creek and Council Creek are sometimes interchanged. Beyond Council Creek is Cedar Creek (see *ante*, note 43).

The Grand Pawnee village stood about thirty miles above the mouth of Loup River, which would be between the Loup and Cedar Creek. The other villages were in the neighborhood (see *ante*, p. 149). Within a few years the villages were moved to or below the mouth of the Loup.—ED.

and here, instead of a single footway, it consisted of more than twenty parallel paths, of similar size and appearance. At a few miles distance from the village, we met a party of eight or ten squaws with hoes and other instruments of agriculture, on their way to the corn plantations. They were accompanied by one young Indian, but in what capacity, whether as assistant, protector, or task-master, we were not informed. After a ride of about three hours, we arrived before the village, and despatched a messenger to inform the chief of our approach.

Answer was returned that he was engaged with his chiefs and warriors at a medicine feast, and could not, therefore, come out to meet us. We were soon surrounded by a crowd of women and children, who gazed at us with some expressions of astonishment; but as no one appeared to welcome us to the village, arrangements were made for sending on the horses and baggage to a suitable place for encampment, while Major Long, with several gentlemen, who wished to accompany him, entered the village.

The party which accompanied Major Long, after groping about some time, and traversing a considerable part of the village, arrived at the lodge of the principal chief. Here we were again informed that Tarrarecawaho, with all the principal men of the village, were engaged at a medicine feast.

Notwithstanding his absence, some mats were spread for us upon the ground, in the back part of the lodge. Upon these we sat down, and after waiting some time, were presented with a large wooden dish of hominy, or boiled maize. In this was a single spoon of the horn of a bison, large enough to hold half a pint, which, being used alternately by each of the party, soon emptied the dish of its contents.

[125] The interior of this capacious dwelling was dimly lighted from a hole at the top, through which the sun's rays, in a defined column, fell aslant upon the earthen floor. Immediately under this hole, which is both window and chimney, is a small depression in the centre of the floor, where the fire is made; but the upper parts of the lodge are constantly filled with smoke, adding much to the air of gloominess and obscurity which prevailed within. The furniture of Long Hair's lodge consisted of mats, ingeniously woven of grass or rushes, bison robes, wooden dishes, and one or two small brass kettles. In the part of the lodge immediately opposite the entrance, we observed a rude niche in the wall, which was occupied by a bison skull. It appeared to have been exposed to the weather, until the flesh and periosteum had decayed, and the bones had become white.

In this lodge we saw a number of squaws of different ages, but all, as we supposed, the wives of Long Hair. This chief, who is somewhat of a Turk in his domestic establishment, has eleven wives, nine of whom are quiet occupants of the same lodge. He has but ten children.

Our visit to this village seemed to excite no great degree of attention. Among the crowd, who surrounded us before we entered the village, we observed several young squaws rather gaily dressed, being wrapped in clean and new blankets, and having their heads ornamented with wreaths of gnaphalium, and the silvery leaves of the *prosalea canescens*. On the tops of the lodges we also saw some display of finery, which we supposed to have been made on account of our visit. Flags were hoisted, shields, and bows, and quivers, were suspended in conspicuous places, scalps were hung out; in short, the people appeared to have exposed whatever they possessed, in the exhibition of which

they could find any gratification of their vanity. Aside from these, we received no distinguished marks of attention from the Grand Pawnees.

[126] After spending an hour or two at their village, we retired to our camp about a mile distant. Here we were shortly afterwards visited by Long Hair, the Malicious chief,⁸⁴ and several others. They had with them a young Spaniard, who interpreted Pawnee and French, by whose means we were able to communicate freely with them. They offered some apology, for not receiving us at their village, saying, they could not have left their medicine feast, if the village had been on fire. We caused our intended route to be explained to them, with the objects we had in view, in undertaking so long a journey. To this they answered, that our undertaking was attended with great difficulty and danger; that the country about the head of the Platte was filled with bands of powerful and ferocious Indians, who would lose no opportunity to attack and injure us; that in some parts of our route, we must suffer from want of water, in others there was no game. "In short," said the Grand chief, "you must have long hearts, to undertake such a journey with so weak a force; hearts that would reach from the earth to the heavens." These representations would, it is probable, have had some effect upon our spirits, had we not supposed they were made entirely for that purpose. The Pawnees undoubtedly hoped to alarm our fears to such a degree, that we should be induced to relinquish our proposed journey; their design being to deter us from passing through their hunting grounds, and perhaps hoping by these means to possess themselves of a larger share of the articles we had provided for Indian presents.

⁸⁴ Ishcatappa; see *ante*, note 46.—ED.

Finding our determination was not to be shaken, they advised us to ascend the Loup fork, instead of taking the route by the Platte, which we had mentioned. This advice, and the statement by which it was accompanied, that there were no bisons on the Platte, we suspected of originating from the same motive which had induced them to make the representation [127] above mentioned; it was not, therefore, allowed in any manner to influence our determination.

After collecting from them what information we could obtain, relative to the country to the west, we endeavoured to dismiss them with some presents. They were not, however, easily to be satisfied — they importuned us for tobacco, and other articles, which the limited nature of our supplies would not allow us to give, as we expected soon to meet with Indians, whose good will it would be more important for us to purchase.

Our camp was something more than a mile from the village. The intervening space, as well as the plain for a great extent on all sides, was covered with great numbers of horses, intermixed with men, women, and children. The men having no serious business, pass much of their time in the open air, either on horseback, or engaged at some game of hazard.

The Pawnees are expert horsemen, and delight in the exhibition of feats of skill and adroitness. Many of their horses are branded, but this is the case with such only as are taken in their predatory excursions against the Spaniards of New Mexico, or the south-western Indians; the branded horses all come originally from the Spaniards. It does not appear that the Indians have any method of affixing distinctive marks to their animals. Each Indian has usually but a very limited number of horses, which

are as well known, and as universally acknowledged to be his, as the children or other members of his family. Some of the finest horses which we observed, were ornamented with gaudy trappings, and furniture of Spanish manufacture.

✓ We spent some time in attempting to explain to the chiefs the nature and effects of the vaccine disease, and in endeavouring to persuade them to influence some of their people to submit to inoculation; [128] but in this we were unsuccessful. It is now several years since the ravages of the small pox have been experienced among them, and it is probable they feel an undue degree of security against its future visitations. We were, however, by no means confident that they comprehended what we said on the subject of vaccination; if they did, it is not probable their confidence in us was sufficient to induce them to receive it as truth. All we were able to effect, was to persuade the young Spanish interpreter to allow us to make use of his arm, to show the Indians that the proposed operation was by no means a formidable one. With the same intention, the operation was performed upon Major Long's arm, and that of Mr. H. Dougherty.

We were not very solicitous to make the experiment among them, our virus, as before remarked, being unfit for use. We were accordingly afraid of impairing their confidence in the remedy.

In the plain about the village, we noticed several little groups of squaws, busily engaged in dressing the skins of the bison for robes. When the processes of tanning and dressing are completed, and the inner surface of the skin dry, figures are traced upon it with vermilion, and other showy colours.

These are designed as ornaments, but are sometimes a

record of important facts. The story of a battle is often depicted in this way, and the robe of a warrior is frequently decorated with the narration, in pictures, of some of his exploits.

During the afternoon our camp was somewhat thronged by the Indians, offering to trade horses, and squaws proposing barter, but at night they withdrew towards their village, and all remained quiet.

As the day began to dawn on the following morning, numerous parties of squaws, accompanied by their dogs, were seen on their way from the village to the corn patches, scattered at the distance of several miles.

[129] At sunrise we mounted our horses, and arranging ourselves as on the preceding day, and carrying a white silk flag with a painted design, emblematic of peaceable intentions in the front, and the United States' flag in the centre of our party, we moved forward towards the second village, distant about three miles from our camp.

The bands which inhabit this village, are called Republican Pawnees. This name, it is said, has been applied to this band, in consequence of their having seceded from the parent stock or Grand Pawnees, some years since, and established themselves under a separate government.

They resided formerly on the Republican fork of the Konzas river, to which they have given their name; whence they removed a few years since to their present situation, that they might enjoy the protection of their more powerful allies, the Grand Pawnees. Their village is distant four miles from that of the Grand Pawnees, and like it on the immediate bank of the river. Fool Robe, their chief, received us with a little more attention than we had met on the preceding day, shaking us each by the hand. He afterwards conducted us to his lodge, within

the village, but excused himself from feasting us, saying, his squaws were all absent at the corn fields.

It was a war party from this band which had plundered the detachment from the steam-boat on the preceding summer near the Konza village. For this outrage they had been compelled, by the prompt and vigorous interference of Major O'Fallon, the Indian agent, to make ample restitution. Whether it was that Fool Robe and his warriors were yet a little sore on account of this affair, or for some other reason, it was evident we were not welcome visitants. We had hitherto entertained exalted ideas of the hospitality of the Pawnees in their manner of receiving strangers, and were consequently a little [130] disappointed at the reception we had met. We stayed but a short time with Fool Robe. Having briefly described to him the outline of our intended journey, and listened to his remarks and advice respecting it, we remounted our horses, and proceeded towards the Loup village.

On our way we were met by the Knife-chief, who, having heard of our intention to visit him, came out on horse-back, and met us more than a mile from the village. He gave us a very cordial and friendly reception, frequently rubbing his breast in token of the satisfaction he felt at seeing us. His frank and intelligent countenance, and his impressive gestures, made him easily understood, without the aid of an interpreter. As our cavalcade passed by him, he appeared to examine, with some attention, the physiognomy and appointments of the individuals composing it; but when his rapid eye alighted upon Julien, with whom he could use much freedom, he rode up to him, and eagerly inquired, by means of signs, (v. Nos. 27. and 14.)⁶⁶ if we had brought with us any whiskey, which we

⁶⁶ See Appendix B.—Ed.

were grieved to learn, by this intimation, that he was acquainted with, and would indulge in; Julien replied in the negative, by the exhibition of the proper sign, (No. 65.) with which he did not betray any dissatisfaction, although it was evident from his subsequent conversation that he believed it to be false. On the way to the village he pointed out a convenient place for us to dispose of our horses and establish our camp. Here we dismounted, leaving our horses in the care of the guard, and followed the chief to his lodge. Soon after our arrival a large dish was placed before us, according to the custom of the Indians, filled with boiled sweet corn. While we were eating, the Knife-chief, with the principal men of his nation, were sitting silently behind us. Having finished our repast, we gave the Indians an account of ourselves, the occasion of our visit to [131] them, our intended journey to the mountains at the head of the Platte, &c. as in the other villages. To all this the Knife-chief listened with great attention. He expressed himself satisfied with the account we had given of the objects of our enterprize, but feared we should be ill treated by the savages we should meet. "Your heart must be strong," said he, "to go upon so hazardous a journey. May the Master of Life be your protector." The same benediction had been given us by the chiefs of the Republican and Grand Pawnees, probably with nearly the same degree of ingenuousness and sincerity. The Pawnees are at war with the Arrapahoes, *Kaskaias*,⁸⁸ and other erratic bands, who wander about

⁸⁸ The "*Kaskaias*" were closely akin to the Comanche, if not identical with them. The name is rarely used after the date of the present account, and the term Comanche is extended so as to include the Indians to which it is here applied. Jedidiah Morse, Indian commissioner, reckoned their numbers (1822) at three thousand, and located them along the base of the Rocky Mountains, in the same area over which the Comanche roamed.—ED.

the sources of the Platte and Arkansa. Their war parties are often sent out in that direction, where they sometimes meet a spirited reception from their enemies. It may be on this account that the Pawnees connect the idea of imminent danger to an excursion into those parts of the country which we proposed to visit. It is, however, highly probable their unwillingness to have us pass through their hunting grounds was the most productive cause of all the anxiety, and all the fears they expressed on our account.

The chief addressed us for some time with great apparent earnestness, but his discourse, as it came to our comprehension by the aid of an interpreter, whom we obtained at this village, seemed directed solely to one object, the exciting our compassion for his poverty.

"Father,— You see me here; I am very poor; my young men are very poor; we hope our Great Father will not forget the red skins, his children, they are poor;" with a great deal more in the same strain. He, however, returned frequently to the subject of our journey to the west. "I will tell my young men," said he, (meaning the war parties which should be sent out in that direction,) "when [132] they meet you, to take you by the hand, and smoke the peace pipe with you."

The Knife-chief, with his son Petalesharoo, celebrated for his filial affection, his valour, and his humanity, visited us at our camp in the afternoon, and we were proud to entertain one whom we thought so worthy of our admiration. We also received a visit from a *Medicine-man*, who, having heard there were great medicine men belonging to our party, requested to be shown some of the mysteries of their profession. We accordingly displayed before him a pair of bullet-forceps, a small case of surgeons' instruments, and some similar articles, and began to explain to

him the use of each. He attended for some time to our discourse, but apparently without comprehending any part of it, and at length turned abruptly away, with an air of dissatisfaction and contempt.

The Canadian, who had been engaged before, we left the Missouri as a guide, now gave us to understand that it was not his intention to accompany the expedition. Having been informed of other persons in the village who were qualified for this undertaking, Major Long made application to several of these, who at first expressed a willingness to accompany him, but soon afterwards recalled their promises. Finding them disposed to trifle in this manner, he at length assured them that, unless some one was immediately procured to attend the expedition as guide, their refusal, and the breach of engagement on the part of Bijeau, should be made known to the agent, and the whole corps of Canadian traders be deprived of the privilege of residing, or trading among the Pawnees. This representation had the desired effect. A ludicrous degree of consternation and alarm was depicted upon the faces of all the traders, and they immediately made a common concern of a subject which before they had treated with very little attention. Two were immediately selected [133] from their number, and were in a short time ready to attend us. It is probable almost any other method of punishment would have appeared to them less terrible. Having been long resident among the Indians, they have conformed to their mode of life, which certainly is not without its charms to the uninformed and the idle. A tie not less powerful is that of conjugal and paternal affection, they having among the Indians wives and children relying upon their exertions for protection and maintenance.

About the village we saw several parties of young men

eagerly engaged at games of hazard. One of these, which we noticed particularly, is played between two persons, and something is staked on the event of each game. The instruments used are a small hoop, about six inches in diameter, which is usually wound with thongs of leather, and a pole, five or six feet long, on the larger end of which a limb is left to project about six inches. The whole bears some resemblance to a shepherd's crook. The game is played upon a smooth beaten path, at one end of which the gamester commences, and running at full speed, he first rolls from him the hoop, then discharges after it the pole, which slides along the path, pursuing the hoop, until both stop together, at a distance of about thirty yards from the place whence they were thrown. After throwing them from him, the gamester continues his pace, and the Indian, the hoop, and the pole arrive at the end of the path about the same time. The effort appears to be to place the end of the pole either in the ring, or as near as possible; and we could perceive that those casts were considered best when the ring was caught by the hook at the end of the pole. What constitutes a point, or how many points are reckoned to the game, we could not ascertain. It is, however, sufficiently evident that they are desperate gamesters, often losing their ornaments, articles of dress, &c. at play.

[134] This game, like some of those described in a former part of this work, requires considerable exertion, and is well calculated for the exhibition of that gracefulness of figure, and that ease and celerity of motion in which the savages so far surpass their civilized neighbours. We saw many young men engaged at these diversions, who had thrown aside their robes, leggins, and all superfluous articles of dress, displaying a symmetry of proportion, and beauty

of form, which we have rarely seen surpassed. They were so intent upon their diversion, that in some instances our approach towards them, as we were rambling about the village, did not for a moment call off their attention from the game.

The population of the three Pawnee villages was estimated by Captain Pike, in 1806, at 6,223, and they were at that time supposed to be able to call into the field 1,993 warriors. At present it is believed they would fall short of this estimate, particularly in the number of warriors. They are, however, still numerous, and are said to be increasing, and are respected by the Sioux, and other neighbouring nations, as warlike and powerful.⁷

About the three villages are six or eight thousand horses, feeding in the plains during the day, but confined at night. These, with a breed of sharp-eared, meagre, wolf-like dogs, are their only domestic animals. On the approach of winter they conceal their stores of corn, dry pumpkins, beans, &c. and with their whole retinue of dogs and horses desert their villages. This they are compelled to do from the want of wood, not only for fuel, but for the support of their numerous horses.

They encamp in their lodges of skins wherever the cotton wood is found in sufficient quantities for their horses, and game for themselves. The horses, in the country bordering the Missouri, are fed during the winter, in the extensive wooded bottoms of that river, and are not, therefore, confined exclusively to [135] the cotton wood, having access to other timber, also to the rushes and coarse grass which abound in the bottoms. We are, however, well assured that the Indian horses, farther to the west, about the upper branches of the Platte, and Arkansa, subsist and thrive

⁷ The Pawnee now number about six hundred and fifty souls.— Ed.

during the winter, with no other article of food than the bark and branches of the cotton wood. The winter at the Pawnee villages is said to be uncommonly severe, but is probably little, if any more so, than at Council Bluff, on the Missouri. Thermometric observations at Council Bluff, and at St. Peters⁸⁸ on the Mississippi, prove that the climate at these two places does not very widely differ from that of the corresponding latitudes on the Atlantic coast, except that it is at times something colder. The vicissitudes of temperature appear to be equally great and sudden.

The climate at Council Bluff is beyond the influence of the south-western winds from the Gulf of Mexico, which have been supposed to have so perceptible an effect to soften the rigours of winter in the valley of the Lower Mississippi. The three Pawnee villages, with their pasture grounds and insignificant enclosures, occupy about ten miles in length of the fertile valley of the Wolf river. The surface is wholly naked of timber, rising gradually to the river hills, which are broad and low, and from a mile to a mile and an half distant. The soil of this valley is deep and of inexhaustible fertility. The surface, to the depth of two or three feet, is a dark coloured vegetable mould intermixed with argillaceous loam, and still deeper, with a fine sileaceous sand. The agriculture of the Pawnees is extremely rude. They are supplied with a few hoes by the traders, but many of their labours are accomplished with the rude instruments of wood and bone which their own ingenuity supplies. They plant corn and pumpkins in little patches along the sides of deep ravines, and wherever

⁸⁸ The purposes of the Yellowstone expedition included the establishment of this military post at the mouth of Minnesota River; during 1819 barracks were erected and fortifications begun.— Ed.

by any accident the grassy [136] turf has been eradicated. Sometimes these little plantations are enclosed with a sort of wicker fence, and in other instances are left entirely open. These last are probably watched by the squaws during the day time, when the horses run at large.

We slept on the night of 12th at our encampment in front of the Pawnee Loup village. During the night all remained at rest except the dogs, who howled in concert, in the same voice, and nearly to the same tune, as the wolves, to whose nightly serenade we were now accustomed.

As soon as the day dawned we observed the surrounding plain filled with groups of squaws, with their small children, trooping to their cornfields in every direction. Some, who passed our encampment, lingered a moment to admire our novel appearance; but the air of serious business was manifest in their countenances, and they soon hurried away to their daily labours. Some of the groups of young females were accompanied by a jolly looking young man as a protector. Their corn is usually gathered before it is entirely ripe, it is then boiled, cut from the cob, and dried. Their cookery consists in boiling it, either with or without the tallow of the bison, according to the state of their supplies. The pumpkins are cut in slips, which are dried in the sun, and afterwards woven into mats for the convenience of carrying. They offered us these articles in exchange for tobacco, vermillion, beads, looking-glasses, and various other trinkets. Also jerked bison beef, and the tallow of that animal, of which we purchased a small quantity. We saw among them the *pomme blanche*, as called by the Canadian traders and boatmen, which is the root of the *Psoralea esculenta*. It is eaten either boiled or roasted, and somewhat resembles the sweet potatoe.

At ten o'clock, on the morning of the 13th, we com-

menced crossing the river, opposite the village. This we found an undertaking of some difficulty, as [137] the current was rapid, and the bottom partook something of the nature of quick-sands. Major Long, Mr. Say, and one or two others, who were riding at the head of our line, had nearly crossed, and were wading their horses about mid-sides deep in the water, when they were suddenly thrown from their saddles by the sinking of their horses' feet in the sand; the horses, however, extricated themselves by their own exertion; and those of the party who had experienced this unexpected immersion, were greeted, upon their standing up in the water, by the shouts and acclamations of the Pawnees who lined the shore we had left. Major Long's gun and jacob-staff, as well as Mr. Say's gun, blanket, and other articles, were dropped into the river; all of these were, however, recovered except the blanket; and Mr. Say, having lost the greater part of his furniture at the river of Souls, by the ill-timed activity of his horse, was now, in a great measure, unencumbered with baggage. At length, by leading our horses, we arrived in safety on the opposite shore, where we encamped, intending to make some further barter with the Pawnees, and to dry some of our baggage, guns, &c. which had been wet in crossing.

The sand of this river, which in the aggregate, has a very white appearance, consists principally of minute grains of transparent quartz, mixed with some which are red, yellow, and variously coloured. The shore, opposite the Loup village, is covered with shrubs and other plants, growing among the loose sands. One of the most common is a large flowering rose, rising to about three feet high, and diffusing a most grateful fragrance. The *Symphoria glomerata*, common in all the country west of the Mississippi thus far, is also a beautiful shrub very

frequent at this place; the flowers are white, with a faint and delicate tinge of red, having the inside of the corolla densely villous, like the *Mitchilla*, to which plant it is manifestly allied. On the hills, at [138] a little distance from the river, we observed the *Cactus fragilis*. This plant, which was first detected on the Missouri by Lewis and Clark, has been accurately described by Mr. Nuttall. The articulations or joints of which it consists, are small, oblong, and tapering, but separate from each other with great readiness, and adhere by means of the barbed spines, with which they are thickly set, to whatever they may happen to touch. This has led to a saying among the hunters, that the plant grows without roots.

In the afternoon a young Indian belonging to the Ari-kara nation on the Missouri, but who resided among the Pawnees, stopped at our camp, on his return from a solitary excursion to the Arkansa. He had brought with him, from one of the upper branches of that river, two masses of salt, each weighing about thirty pounds. This salt is pure and perfect, consisting of large crystalline grains, so concreted together as to form a mass about twenty inches in diameter and six in thickness. It had evidently been formed by the evaporation of water in some pond or basin, and that surface of the mass, which was its lower in its original position, was intermixed with red sand, indicating the sort of soil in which it is found. Mr. Peale procured some specimens in exchange for tobacco.

This Indian had been many days absent, on his excursion, and as he sat upon his horse before our encampment we had an opportunity to note a trait in the Indian character, which has been the subject of remark by many authors, and which we had previously observed in several instances ourselves; we allude to the apparent coolness

which friends, and the nearest relatives, observe to each other when they meet after a long separation. Several of his fellow townsmen, who were about our encampment, hardly noticed him when he first appeared, and it was only after the lapse of a considerable interval [139] that one of them spoke to him, but without any visible ceremony of greeting.

On the morning of the 14th, we left our encampment, opposite the village of the Pawnee Loups, and proceeded on our journey, taking the most direct course towards the Platte. Our party had here received an addition of two men, one named Bijeau, engaged as guide and interpreter, the other, Ledoux, to serve as hunter, farrier, &c. Both were Frenchmen, residing permanently among the Pawnees, and had been repeatedly on the head waters of the Platte and Arkansa, for the purpose of hunting and trapping beaver. Bijeau was partially acquainted with several Indian languages; in particular, that of the Crow nation, which is extensively understood by the western tribes, and, by frequent intercourse with the savages he had gained a complete knowledge of the language of signs, universally current among them. The great number, and the wide dissimilarity of the dialects of the aborigines render this method of communication necessary to them, and it is not surprising it should have arrived at considerable perfection among tribes who, from their situation and manner of life, must often find occasion to make use of it.

Besides these two men, a young Spaniard, a refugee from some of the settlements of New Mexico, joined our party, intending to accompany us as far as his fear of his own countrymen would permit. He had probably been guilty of some misdemeanor, which made it necessary to avoid his former acquaintances, and, on this account, he could

not be induced to accompany us into the neighbourhood of the Spanish settlements. The Frenchmen brought with them three horses and a mule, so that our party, which was now supposed to be made up for the journey, consisted, exclusive of the Spaniard, of twenty-two men, thirty-four horses and mules, and two dogs.

[140] We were well armed and equipped, each man carrying a jauger or rifle gun, with the exception of two or three who had muskets; most of us had pistols, all tomahawks and long knives, which we carried suspended at our belts. We believed ourselves about to enter on a district of country inhabited by lawless and predatory bands of savages, where we should have occasion to make use, not only of our arms, but of whatever share of courage and hardihood we might chance to possess.

The country which we passed on the 14th, lying between the Loup fork and the Platte, has a moderately hilly surface, except that portion of it which comprises the bottom lands of the two rivers. The ridges are of little elevation, destitute of stone of any kind, and irregular in direction; the soil is sandy and infertile. The high and barren parts of this tract are occupied by numerous communities of the Prairie dog or Louisiana marmot.**

** *Arctomys Ludoviciana*. ORD.— This interesting and sprightly little animal has received the absurd and inappropriate name of Prairie dog, from a fancied resemblance of its warning cry to the hurried barking of a small dog. This sound may be imitated with the human voice, by the pronunciation of the syllable cheh, cheh, cheh, in a sibilated manner, and in rapid succession, by propelling the breath between the tip of the tongue and the roof of the mouth. The animal is of a light dirty reddish-brown colour above, which is intermixed with some gray, also a few black hairs. This coating of hair is of a dark lead colour next the skin, then bluish-white, then light reddish, then gray at the tip. The lower parts of the body are of a dirty white colour. The head is wide and depressed above, with large eyes; the iris is dark brown. The ears are short and truncated; the whiskers of moderate length and black; a few bristles project from the anterior portion of the superior orbit of the eye, and a few also from a

On arriving near the Platte we observed a species of prickly pear (*Cactus jerox. N.*) to become very numerous. It resembles the common prickly pear of New Jersey, (*C. opuntia.*) but is larger, and protected by a more formidable armature of thorns. Our Indian horses were so well acquainted with this plant, and its properties, that they used the utmost care to avoid stepping near it. The flowers are of a sulphur yellow, and when fully expanded are nearly as large as those of the garden pæony, and crowded together upon the summits of the terminal articulations of which the plant consists. These articulations,

wart on the cheek: the nose is somewhat sharp and compressed; the hair of the anterior legs, and that of the throat and neck, is not dusky at base. All the feet are five-toed, covered with very short hair, and armed with rather long black nails: the exterior one of the fore foot nearly attains the base of the next, and the middle one is half an inch in length: the thumb is armed with a conic nail, three-tenths of an inch in length; the tail is rather short, banded with brown near the tip, and the hair, excepting near the body, is not plumbeous at base.*

The length of the animal, from the tip of the nose to the origin of the tail, is sixteen inches; of the tail, two inches and three-fourths; of the hair at its tip three-fourths of an inch.

As particular districts, of limited extent, are, in general, occupied by the burrows of these animals, such assemblages of dwellings are denominated *Proaire dog villages* by hunters and others who wander in these remote regions.

These villages, like those of man, differ widely in the extent of surface which they occupy; some are confined to an area of a few acres, others are bounded by a circumference of many miles. Only one of these villages occurred between the Missouri and the Pawnee towns; thence to the Platte they were much more numerous.

The entrance to the burrow is at the summit of the little mound of earth, brought up by the animal during the progress of the excavation below.

These mounds are sometimes inconspicuous, but generally somewhat elevated above the common surface, though rarely to the height of eighteen inches. Their form is that of a truncated cone, on a base of two or three feet, perforated by a comparatively large hole or entrance at the summit or in the side. The whole surface, but more particularly the summit, is trodden down and compacted, like a well-worn pathway. The hole descends vertically to

*This description is drawn chiefly from a well-prepared specimen belonging to the Philadelphia museum, the tail of which, if we may decide from memory, is somewhat too short.

(or segments contained between the joints,) are oblong and flattened, being longer and thicker than a man's hand. A second species, the *C. mamillaris*, N. occurs on the dry sandy ridges between the Pawnee villages and the Platte. The beautiful *cristaria coccinea*. Ph. (*malva coccinea*. N.) is very frequent in the low plains along the Platte. Its flowers [141] have nearly the aspect of those of the common wild rose, except that they are more deeply coloured.

We arrived at the Platte, a little before sun-set, the distance from the Pawnees being, according to our computa-

the depth of one or two feet, whence it continues in an oblique direction downward.

A single burrow may have many occupants. We have seen as many as seven or eight individuals sitting upon one mound.

They delight to sport about the entrance of their burrows in pleasant weather; at the approach of danger they retreat to their dens; or when its proximity is not too immediate, they remain, barking, and flourishing their tails, on the edge of their holes, or sitting erect to reconnoitre. When fired upon in this situation, they never fail to escape, or if killed, instantly to fall into their burrows, where they are beyond the reach of the hunter.

As they pass the winter in a lethargic sleep, they lay up no provision of food for that season, but defend themselves from its rigours by accurately closing up the entrance of the burrow. The further arrangements which the Prairie dog makes for its comfort and security are well worthy of attention. He constructs for himself a very neat globular cell with fine dry grass, having an aperture at top, large enough to admit the finger, and so compactly formed that it might almost be rolled over the floor without receiving injury.

The burrows are not always equidistant from each other, though they occur usually at intervals of about twenty feet.*—JAMES.

Comment by Ed. The scientific name of the prairie-dog is now *cynomys ludovicianus*; see Bradbury's *Travels*, in our volume v, note 61.

* In these villages, where the grass is fed close, and where much fresh earth is brought up and exposed to the air, is the peculiar habitat of a species of *Solanum* approaching the *S. triflorum* of Nuttall, which, he says, occurs as a weed "about the gardens of the Mandans and Minatarees of the Missouri, and in no other situations." It appears to differ from the *S. triflorum* in being a little hirsute, with flat, runcinate, pinnatifid leaves, and the peduncles alternating with the leaves. The *Solanum heterandrum* of Pursh, now referred to the new genus *Androcera* of Nuttall, is also very common, but is not confined, like the plant just mentioned, to the marmot villages. We collected also the *Psoralea cuspidata*, Ph. *P. esculenta*, N. P. *incana*, N. also a species of *Hieracium*—*H. runcinatum*. Plant hirsute, leaves all radical, elliptic-oblong, runcinate; scape few-flowered, somewhat compressed, and angular; glands on the hairs of the calix, very small and diaphanous; about one foot high; flower small. Hab. in depressed, grassy situations along the Platte.

tion, twenty-five miles. After entering the valley of the river, we travelled several miles across an unvaried plain, and at length passing down by a gradual descent of a few feet, we came upon a second level tract, extending to the river.

The soil of the first of these portions is a bed of sand, intermixed with small water-worn pebbles and gravel; that of the latter is more fertile, and produces a luxuriant vegetation.

Our guide informed us that the Platte, opposite the point where we entered its valley, contains an island which is more than one day's journey across, and about thirty miles in length.⁹⁰

At no great distance from our camp, which was placed immediately on the brink of the river, we found the body of a horse lying dead in the edge of the water. The animal had, in all probability, been recently lost by a war party of Indians.

15th. Soon after leaving our camp we crossed a small stream, tributary to the Platte, from the north. It is called Great Wood river, and has some timber along its banks.⁹¹

Our provisions being nearly exhausted, two of the hunt-

⁹⁰ Known as Grand Island. It extends from Buffalo County on the west through Hall into Merrick County. The dimensions given in the text are not accurate; it has an average width of only a mile and three-quarters, but is more than fifty miles in length. Frémont described it (1842) as well timbered, fertile, and above high water level; he noted it as the most suitable site on the lower Platte for a military post. See *Report of Exploring Expedition to Rocky Mountains in the Year 1842* (Washington, 1845), p. 78. Fort Kearney was established in 1848, in Kearney County, near the upper end of the island.—ED.

⁹¹ Now Wood River. It rises in Custer County, flows southeast through Dawson and western Buffalo counties, then turns and flows east by northeast to central Hall County, where it empties into the channel of the Platte, which runs north of Grand Island. The timber on its banks, from which it obtained its name, was consumed in building the Union Pacific Railroad.—ED.

ers were sent forward in search of game; but after some time they rejoined the party, having killed nothing.

Shortly afterwards a single bison was discovered some miles ahead of the party, and travelling apparently in the same direction. Four of our hunters, having disencumbered their horses of all their baggage, spurred forward in the pursuit, but none of them were able to overtake the animal, except the young Spaniard, who came near enough to wound it with an arrow; but his horse being exhausted, he [142] was compelled to desist from the pursuit, and suffer the bison to escape.

Having ascended the Platte about sixteen miles, we halted, to make such a dinner as the condition of our stores would allow; and here the Spaniard took his leave of us to return to the Pawnees.

In the scenery of the Platte there is the utmost uniformity; a broad plain, unvaried by any object on which the eye can rest, lies extended before us; on our right are the low and distant hills which bound the valley, and on our left the broad Platte, studded with numerous small but verdant islands. On these islands is usually a little timber, which is not met with in other situations. We were fortunate in finding, towards evening, an old Indian encampment, where were poles, stakes, &c. which had been brought from the islands, and here we placed our camp. Some antelopes were seen during the day, but so wild and vigilant that all our efforts to take them proved unsuccessful. Our supper, therefore, was not of the choicest kind, and, what was infinitely more vexatious to us, was limited in quantity.

On the following day we passed a number of prairie dog villages, some of them extending from two to three miles along the river. Though much in want of game, most of

our exertions to take these animals were without success. A number were killed, but we were able to possess ourselves of no more than two of them. These we found to be in good condition and well flavoured. Their flesh nearly resembles that of the ground hog, or woodchuck (*Arctomys Marylandica*.)

In some small ponds near the Platte we saw the common species of pond weed (*Potamogeton natans* and *P. fluviatans*. Ph.) also the *Utricularia longirostris*, of Leconte, and an interesting species of *Myriophyllum*.²²

By observations at morning and evening the magnetic variation was found thirteen and an half degrees [143] east. In the middle of the day the heat was excessive, and we were under the necessity of halting at a place where no shade could be found to shelter us from the scorching rays of the sun, except what was afforded by our tents, which were set up for this purpose. Here we remained until 4 P. M. when we resumed our journey. We crossed towards evening a small creek, three miles beyond which we arrived at an old Indian camp, where we halted for the night. We had not been long here before a tremendous storm of wind assailed our tents with such violence, that it was only by stationing ourselves outside, and holding the margin to the ground, that we were able to keep them standing.

²² Among other plants collected along the Platte on the 15th and 16th June, are the *Cherianthus asper*, N., *Helianthemum canadense*, *Atheropogon apluroides*, N., *Myosotis scorpioides*, *Pentstemon gracile*. N. The *Cherianthus asper* is intensely bitter in every part, particularly the root, which is used as medicine by the Indians. In depressed and moist places along the river, we observed a species of *Plantago*, which is manifestly allied to *P. eriophora* of Wallich, Flor. Ind. p. 423, also to *P. attenuata* of the same work, p. 422. The base of the scape and leaves is invested with a dense tuft of long fine wool, of a rusty brown colour. Before the plant is taken up this tuft is concealed in the soil, being a little below the surface, but it adheres closely to the dried specimen. Its leaves, which are the size of those of *P. lanceolata*, are smooth, fine nerved, with a few remote denticulations. Scape slender, exceeding the leaves; bractæas ovate, spike slender, few-flowered — *P. attenuata*, Bradbury? — JAMES.

Two of the hunters who had been sent out during the afternoon, returned to camp late in the evening, bringing in a buck antelope, a highly acceptable acquisition to us, as we had been for some time restricted to short commons. The flesh we found palatable, being very similar in every respect to that of the common deer.

We had proceeded but a few miles from our camp, on the following morning, when we perceived a number of antelopes, at a little distance in the prairie. Being on the windward side of the party, they were not able, by their sense of smelling, to inform themselves of the nature of the danger which was approaching. One of them, leaving his companions, came so near our line as to be within the reach of a rifle ball, and was killed by Lieutenant Swift.

The antelope possesses an unconquerable inquisitiveness, of which the hunters often take advantage, to compass the destruction of the animal. The attempt to approach immediately towards them in the open plain, where they are always found, rarely proves successful. Instead of this, the hunter, getting as near the animal as is practicable, without exciting alarm, conceals himself by lying down, then fixing a handkerchief or cap upon the end of his [144] ramrod, continues to wave it, still remaining concealed. The animal, after a long contest between curiosity and fear, at length approaches near enough to become a sacrifice to the former."²

In the afternoon a single bison was seen at the distance of several miles, being the second since we had left the Pawnee villages, which were now about a hundred miles distant, and we were beginning to fear that the representations of the Indians, in relation to the difficulty of pro-

² See Bradbury, p. 113.—JAMES.

Comment by Ed. See reprint in volume v of our series, p. 123.

curing game to subsist so large a party as ours, would prove true. We found, however, that every part of the country, which we had recently passed, had, at no distant period, been occupied by innumerable herds of bisons. Their tracks and dung were still to be seen in vast numbers; and the surface of the ground was strewn with skulls and skeletons, which were yet undecayed.

At 4 o'clock P. M. we arrived at an old Indian encampment, opposite an island, on which was some wood, and perceiving that none would be met with for many miles a-head, we determined to halt here for the night.

The 18th, being Sunday, we remained in camp. This indulgence was not only highly acceptable to the soldiers and men who accompanied us, they being much harassed and fatigued by their exertions during the week, but was necessary for our horses, which, not being in good condition when we left the Missouri, were perceptibly failing under the laborious services they were made to perform. At our nightly encampments we found it necessary to confine them, as we had not always a plentiful supply of grass in the immediate vicinity of our camp, and if left at large they would wander in search of better pasture, and occasion us great trouble to collect them again in the morning. Accordingly, long ropes had been provided, [145] which were carried constantly on the necks of the horses, and by these they were made fast during the night to stakes driven into the ground. After having eaten all the grass within his reach, the horse was removed to another place, and this was done several times during the night, by a guard kept constantly on duty, both for the performance of this service, and also to give timely notice in case of the approach of Indians to the camp. Notwithstanding this care, on our part, our horses were sometimes but poorly fed,

as we were often compelled to encamp in places where little grass was to be found. When we remained in camp during the day, they were suffered to range more at liberty, a watch being kept out to prevent their wandering too great a distance. Notwithstanding the sabbath was devoted to the refreshment of our horses, and the relaxation of the men who accompanied us, some attention was given to the great objects of the expedition. Astronomical observations for the correction of our time-piece, and for other purposes, were made. At Engineer Cantonment we had furnished ourselves with portfolios of paper, to receive specimens of such plants as we might collect; but we found that the precautions which had been used to protect these from the weather had been insufficient, some of our collections being in part wet, and others having been made during the heavy rains, which fell before we reached the Pawnee villages, required much attention. The sabbath also afforded us an opportunity to devote a little attention to the important objects of personal cleanliness and comfort. The plain about our encampment was strewn with the bones of the bison, and other animals; and among the rest we distinguished some of men. We picked up a number of human skulls, one of which we thought it no sacrilege to compliment with a place upon one of our pack-horses. Our guides could give us no satisfactory information of the time and manner in which the several persons, [146] to whom these bones formerly belonged, had been compelled to lay them down in this place; it is certain, however, that at no very distant period, a battle had been fought, or a massacre committed, on this spot.

We had now arrived at a point about two hundred miles distant from the confluence of the Platte and Missouri, yet the character of the former river was but little changed.

It was still from one to three miles in breadth, containing numerous islands, covered with a scanty growth of cotton-wood willows, the *amorpha fruticosa*, and other shrubs.

[147] CHAPTER VIII [VI]

- The Platte — Desert Plains — Mirage — Arrival at the Rocky Mountains.

THE Platte, called by the Otoes Ne-braska, (Flat river, or water,) is, as its name imports, almost uniformly broad and shoal. It is fordable at almost any place, except when swollen by freshets, which occur in the spring season, from the melting of snow, and occasionally during the other portions of the year, from excessive rain. Its bed is composed almost exclusively of sand, forming innumerable bars, which are continually changing their position, and moving downward, till at length they are discharged into the Missouri, and swept away to the ocean by that rapid and turbulent river.

The range of the Platte, from extreme low to extreme high water is very inconsiderable, manifestly not exceeding six or eight feet. This is about the usual height of its banks above the surface of the sand which forms its bed. The banks are sometimes overflowed, but evidently to no great extent. The rapidity of the current, and the great width of the bed of the river, preclude the possibility of any extensive inundation of the surrounding country. The bottom lands of the river rise by an imperceptible ascent on each side, extending laterally to a distance of from two to ten miles, where they are terminated by low ranges of gravelly hills, running parallel to the general direction of the river. Beyond these the surface is an undulating plain, having an elevation of from fifty to one hundred

feet, and presenting the aspect of hopeless and irreclaimable sterility.

The Missouri, in compliance with the usage of boatmen, hunters, &c., has been usually considered under two divisions; the lower extending from the [148] Mississippi to the confluence of the Platte, and the upper, comprehending all above that point. As might be expected, the influx of so large and so peculiar a river as the Platte, gives a new character to the Missouri below. It is more rapid, more difficult of navigation, and the water more turbid than above.

Among other plants observed about our encampment, was the wild liquorice, (*glycyrrhiza lepidota*, N.) which is believed to be the plant mentioned by Sir A. Mackenzie,⁴⁴ which is used as food by the savages of the north-west. The root is large and long, spreading horizontally to a great distance. In taste it bears a very slight resemblance to the liquorice of the shops, but is bitter and nauseous. The leaves are frequently covered with a viscid exudation.

We were prevented from continuing our astronomical observations, in the afternoon, the weather becoming cloudy, and at evening a thunder-storm commenced, which continued with short intermissions during the night. The lightning exhibited an incessant glare, and peals of thunder which seemed to shake the earth to its centre, followed each other in rapid succession.

On Monday the 19th, we moved on, and ascending the Platte about thirty miles, arrived in the evening at a place where the hills on the north side close in, quite to the bed of the river. On both sides they became more broken and elevated, and on the north, they approached

⁴⁴ For sketch of Sir Alexander Mackenzie, see Franchère's *Narrative*, in our volume vi, note 4.—ED.

so near to the bed of the Platte, that we were under the necessity of travelling across them. We were glad, however, of any change of scene. The monotony of a vast unbroken plain, like that in which we had now travelled nearly one hundred and fifty miles, is little less tiresome to the eye, and fatiguing to the spirit, than the dreary solitude of the ocean.*

With this change of the surface, some change is observed in the vegetable products of the soil. Here [149] we first saw a new species of prickly poppy,** with a spreading white flower, as large as that of the common poppy of the gardens. The aspect of this plant is very similar to that of the common poppy, except that the leaves are covered with innumerable large and strong prickles. When wounded it exudes a thick yellowish sap, intensely bitter to the taste. On the summits of some of the dry sandy ridges, we saw a few of the plants called Adam's needles, (*yucca angustifolia*) thriving with an appearance of luxuriance and verdure, in a soil which bids defiance to almost every other species of vegetation. Nature has, however, fitted the yucca for the ungenial soil it is destined to occupy. The plant consists of a large tuft of rigid spear-pointed leaves, placed immediately upon the root, and sending up in the flowering season, a stalk bearing a cluster of lillaceous flowers as large as those of the common tulip of the gardens. The root bears more resemblance to the trunk of a tree, than to the roots of ordinary plants. It is two or three inches in diameter, descending undivided to a great depth below the surface, where it is impossible the moisture of the earth should ever be

* The Sand Hills begin at about the hundredth meridian, which crosses the Platte in western Dawson County.—ED.

** *Argemone alba*, a large plant, very distinct from *A. mexicana*.—JAMES.

exhausted, and there terminates in numerous spreading branches. In some instances, the sand is blown from about the root, leaving several feet of it exposed, and supporting the dense leafy head, at some distance from the surface.⁹⁷

Several bisons and other game, had been seen in the course of the day, but nothing taken. As our provisions were now exhausted, it was resolved to remain encamped where we were, while parties were sent out in different directions to hunt.⁹⁸

Being now at a place where, as our guide informed us, the Pawnees often cross the Platte, and as it was our intention to ascend on the other side of the river, Major Long rode across to ascertain the practicability [150] of fording; but the summer freshet being now at its height, it was found the river could not be crossed without swimming, and the design was relinquished. Six of our

⁹⁷ Other plants found here, where the great sunflower *Helianthus giganteus*, *Asclepias obtusifolia*, Ph., *A. viridiflora*, Ph., *A. syriaca*, and *A. incarnata*, *Amorpha canescens*, N., *Erigeron pumilum*, N., *A. Veronica* approaching *V. decumbens*, *Scutellaria galericulata*, *Rumex venosus*, N., and several which are believed to be undescribed.—JAMES.

⁹⁸ In rain water puddles, we remarked a new species of Branchiopode belonging to the genus *Apus*; small crustaceous animals, which exhibit a miniature resemblance to the King or Horse-shoe Crab, (*Himulus polyphemus*), of our sea coast, but which are furnished with about sixty pairs of feet, and swim upon their back. The basins of water, which contained them, had been very much diminished by evaporation and infiltration, and were now crowded to excess, principally with the *apus*, great numbers of which were dying upon the surrounding mud, whence the water had receded. This species is distinguished from the *productus* of Bosc, and *montagu* of Leach, by not having the dorsal carina prolonged in a point behind; and from *cancriformis*, by the greater proportional width of the thorax, and more obtuse emargination behind. The length of the thorax along the middle, is three-tenths of an inch, and its greatest breadth somewhat more. It may be named *Apus obtusus*.

A very large species of *Cypris*, also inhabits these small rainwater pools in great numbers, of which the valves are more than one-fifth of an inch in length.—JAMES.

party, including the hunters, were sent out in pursuit of game.

- At camp, observations were taken for ascertaining longitude and other purposes. At evening, Mr. Peale returned, having killed an antelope at the distance of ten miles from the camp, and brought it within about four, where being fatigued and hungry, he had made a fire, cooked and ate part of the animal, and left the remainder, suspending a handkerchief near it, to protect it from the wolves. Soon afterwards others returned, and when all were collected, it appeared there had been killed one bison, two antelopes, and a hare, all at a distance from camp. Horses were accordingly sent out to bring in the meat, a part of which we attempted to dry during the night, by cutting it in thin pieces and exposing it over a slow fire, but a storm of wind and rain, which continued greater part of the night, prevented our success in this attempt.
- 21st. The storm continued throughout the night, and the following day was cold, with a heavy mist from the south-east.

After travelling this day our customary distance, which was about twenty-five miles, we were compelled to halt at a place where we could find no poles to set up our tents. We were fortunate in finding part of a tree which had drifted down the Platte, and which sufficed to make a fire for the cooking of our supper. An Indian dog, who had made his appearance at the encampment on the preceding day, had followed us thus far, but kept aloof, not allowing us to come within one or two hundred yards of him.

On the following morning, six miles from our camp, we arrived at the confluence of the north and south fork of the Platte. We had halted here, and were making

preparations to examine the north fork, with a view of crossing it, when we saw two elk plunge into the river a little above us on the same [151] side. Perceiving it was their design to cross the river, we watched them until they arrived on the other side, which they did without swimming. We accordingly chose the same place they had taken, and putting a part of our baggage in a skin canoe, waded across, leading our horses, and arrived safely on the other side; no accident having happened, except the wetting of such of our baggage as was left on the horses.

The north fork at its confluence is about eight hundred yards wide, is shoal and rapid like the Platte, and has a sandy bed. We were informed by our guide, who had been repeatedly to its sources, that it rises within the Rocky Mountains, about one hundred and twenty miles north of the sources of the Platte.

It is probably the river which was mistaken by Captain Pike for the Yellow-stone, and has been laid down as such on his map, whence the mistake has been copied into several others. It has its source in numerous small streams, which descend from the hill surrounding a circumscribed valley within the mountains, called the Bull-pen. This basin is surrounded by high and rugged mountains, except at the place where the north fork passes into the plains. On each side of this strait, or pass, are high and abrupt rocky promontories, which confine the river to a narrow channel. The diameter of the circumscribed valley, called the Bull-pen, is one day's travel, about twenty miles.** The upper branches of

** North Platte River rises in Laramie County, Colorado, in the high valley called North Park, enclosed by the Park Range and the Medicine Bow Mountains. It flows north to Natrona County, in central Wyoming, and thence turns to the southeast.—ED.

the north fork have some timber, mostly cotton-wood and willow, and abound in beaver.¹⁰⁰

¹⁰⁰ *Castor fiber*.—Some of the European naturalists appear to be in doubt, whether or not the beavers of Europe are of the same species with ours, from the circumstance of the former not erecting habitations for themselves, thus appearing to differ at least in habit, from the North American, (which are usually but improperly called, Canada beaver, as they are not confined to Canada, but are found far south in the United States, and east to the confluence of the Ohio and Mississippi,) but it is possible, that the aboriginal manners of the European beavers, corresponded with those of ours, and that necessity, resulting from the population of the country by civilized man, compelled them to resort to a different mode of life, to escape the certain destruction, with which the great demand for their fur threatened them. But as the European beaver is smaller than ours, other naturalists have regarded it as a distinct species. In those districts of country of North America, from which they have not yet been exterminated, and which are populated by the whites, as particularly on the Mississippi, above the Ohio, and below St. Louis, we have not heard that they build, but it is more than probable, that, as in Europe, they change their mode of life, in order to be the more effectually concealed from view. From subsequent observation, we have learned, that the beaver does not attempt to dam large streams, perceiving at once the impracticability of the undertaking: his object in damming a stream appears to be, to preserve a constancy in the height of the water, in order that the entrance to his habitation in the bank may be concealed, and that the curious conical edifice may not be destroyed by a sudden flood, or too much exposed by a deficiency of water.

An Indian informed us, that in his time, he has caught three specimens of this animal, that had each a large white spot on the breast. Singular accounts of this animal are given us by the hunters, but which we had no opportunity of verifying.

Three beavers were seen cutting down a large cotton-wood tree; when they had made considerable progress, one of them retired to a short distance, and took his station in the water, looking steadfastly at the top of the tree. As soon as he perceived the top begin to move towards its fall, he gave notice of the danger to his companions, who were still at work, gnawing at its base, by slapping his tail upon the surface of the water, and they immediately ran from the tree out of harm's way.

The spring beaver are much better for commerce than those of the autumn and early winter, as the fur is longer and more dense. But the beaver taken in the vicinity of the Rocky Mountains is almost equally good during the year.

Mr. Frazer, a gentleman who has been several years engaged in the fur trade, in the interior of North America, on the Columbia, and in North California, in speaking of the beaver, mentioned a circumstance, which we do not remember to have seen recorded. The lodges are usually so placed, that the animals ascend the stream some distance to arrive at the spot whence they procure their food. They make their excursions under water, and they have, at equal distances,

From the limited information communicated to the public, on the subject of Mr. Hunt's Expedition to the mouth of the Columbia, commenced in the year 1811, it appears that a part of the men engaged in that undertaking, in their return from the Pacific, crossed the Rocky Mountains from some one of the upper branches of Lewis' river, and falling upon the sources of the north fork of the Platte, descended thence to the Missouri.

[152] On the 28th of June, 1812, Mr. Robert Stewart, one of the partners of the Pacific Fur Company, with two Frenchmen, M'Clellan, and Crooks, left the Pacific ocean with despatches for New York.

Having proceeded about seven hundred miles, they met Mr. Joseph Miller, on his way to the mouth of the Columbia. He had been considerably to the south and east, and had fallen in with the Black-arms, and the Arrapahoes, who wander about the sources of the Arkansa. By the latter of these he had been robbed, in consequence of which he was now reduced to starvation and nakedness.

Mr. Stewart and his companions had fifteen horses, but soon afterwards met with a band of the Crow Indians, near the Rocky Mountains, who behaved with the most

excavations under the bank, called *washes*, into which they go and raise their heads above the surface, in order to breathe, without exposing themselves to be seen. In winter the position of these washes is ascertained, by the hollow sound the ground returns when beaten; and the beavers are sometimes taken, by being pursued into these holes, the entrances to which are afterwards closed.

Otters are frequent on the Missouri. We had an opportunity of seeing on the ice of Boyer Creek a considerable number of the tracks or paths of otters; they were the more readily distinguishable, from there being snow of but little depth on the ice, and they appeared as if the animal was accustomed to slide in his movements on the ice, as there were, in the first place, the impressions of two feet, then a long mark clear of snow a distance of three or four feet, then the impressions of the feet of the animal, after which the sliding mark, and so on alternately. These paths were numerous, and passed between the bank and a situation, where a hole had been in the ice, now frozen over.—JAMES.

unbounded insolence, and finally stole every horse belonging to the party.

They now found themselves on foot, with the Rocky Mountains, and a journey of two thousand miles before them; fifteen hundred of which was through a country wholly unknown, as their route lay considerably to the south of that of Lewis and Clarke.

Putting the best face upon their prospects, they pursued their journey towards the Rocky Mountains, travelling east-south-east, until they struck the "head waters of the great river Platte," which they followed to its mouth, having spent the winter upon it, six hundred miles from the Missouri.¹⁰¹

The confluence of the north fork and the Platte is, according to our estimate of distances, one hundred and forty-nine miles by our courses, from the Pawnee Loup village.

Some of the upper branches of the Wolf river head about thirty miles to the north of this point.

After fording the north fork, we crossed a narrow point of low prairie to the Platte, where, as it was [153] now near night, we resolved to encamp, and attempt the passage of the river on the following day.¹⁰²

Our view of the opposite margin of the Platte, during this day's march, had been intercepted by an elevated

¹⁰¹ The narrative from which this sketch is taken, was published in the *Missouri Gazette*.—JAMES.

Comment by Ed. The article in the *Missouri Gazette* is reprinted in Bradbury's *Travels*, volume v of our series, Appendix III, p. 224. An account of Hunt's expedition and sketches of the partners of the Pacific Fur Company, mentioned in the text, will be found in the same volume, notes 2, 3, 72, 119.

¹⁰² The town of North Platte is now situated on this tongue of land between the forks of the Platte; and recently a family named Peale, relatives of T. R. Peale of Long's party, were among the residents.—ED.

swell of the surface, which extended along, parallel to the river, that we were now approaching. Immediately upon surmounting this undulation we saw before us, upon the broad expanse of the left margin of the river, immense herds of bisons, grazing in undisturbed possession, and obscuring, with the density of their numbers, the verdant plain; to the right and left, as far as the eye was permitted to rove, the crowd seemed hardly to diminish, and it would be no exaggeration to say, that at least ten thousand here burst on our sight in the instant. Small columns of dust were occasionally wafted by the wind from bulls that were pawing the earth, and rolling; the interest of action was also communicated to the scene, by the unwieldy playfulness of some individuals, that the eye would occasionally rest upon, their real or affected combats, or by the slow or rapid progress of others to and from their watering places. On the distant bluffs, individuals were constantly disappearing, whilst others were presenting themselves to our view, until, as the dusk of the evening increased, their massive forms, thus elevated above the line of other objects, were but dimly defined on the skies. We retired to our evening fare, highly gratified with the novel spectacle we had witnessed, and with the most sanguine expectations of the future.

In the morning we again sought the living picture, but upon all the plain which last evening was so teeming with noble animals, not one remained. We forded the Platte with less delay and difficulty than we had encountered in crossing the north fork.

It is about nine hundred yards wide, and very rapid, but so shoal that we found it unnecessary to dismount from our horses, or to unpack the mules. [154] We

found the plains on the south side of the Platte more closely depastured than those we had before seen. The grass is fine and short, forming a dense and matted turf, as in the oldest pastures.

- Meeting with wood at about three o'clock P. M., we resolved to encamp. On the two preceding evenings, we had found it difficult to collect as much wood as sufficed to kindle a fire, which was afterwards kept up with the dung of the bison, though not without some difficulty, as the weather was rainy.

The dung of the bison is used as fuel in many parts of the woodless country southwest of the Missouri, by the Indians, and by hunters, who often encamp where no wood is to be found. We learn from Sonnini¹⁰⁰ and others, that the excrement of the camel, mixed with chopped straw and afterwards dried, is similarly used in the woodless parts of Egypt.

- The hills on the south side of the Platte, above the confluence of the north fork, become more abrupt and elevated, approaching in character those of the Missouri which are destitute of stone. There is here the same transcript of Alpine scenery, in miniature, which constitutes so striking a feature in the Missouri landscape, when viewed from the river bottom.

We had no sooner crossed the Platte, than our attention was arrested by the beautiful white primrose (*œnothera pinnatifida*, N.) with its long and slender corolla reclining upon the grass. The flower, which is near two inches

¹⁰⁰ Charles Nicholas Sigisbert Sonnini de Manoncourt was a French naturalist and traveller, who visited Egypt, Greece, and Asia Minor during the years 1777-80. He lost his fortune by the Revolution, and spent the remainder of his life in writing and editing scientific works. The book here referred to is *Voyage dans la haute et dans le basse Egypt* (Paris, 3 vols., 1799). It was twice translated into English.—ED.

long, constitutes about one-half of the entire length of the plant.¹⁰⁴

The valley of the Platte, above the forks, is much narrower, and a little more irregular in direction than below, and is frequently interrupted by small hills running in towards the river. On ascending these hills, we found them of a coarse sand, and containing more gravel and small pebbles than below. Among the gravel stones, small fragments of flesh-coloured [155] felspar are distinguished. About the summits of the hills we saw some detached pieces of fine carnelion, with agates and calcedony.

We had often examined, with some anxiety, the turbid waters of the Platte, hoping thereby to gain information respecting the predominating rock formations of the mountainous district, from which that river descends.

It had been a received opinion among some of the geologists of the United States, that the Rocky Mountains were not of primitive rocks; we had hitherto observed nothing which could either confirm or invalidate this opinion.

The great alluvial formation, which occupies the country on both sides of the lower portion of the river Platte, is an almost unmixed siliceous sand, in no manner distinguishable from the *débris* of the sandstones of transition mountains. Near the forks of the Platte, we first observed that the waters of that river bring down, among other matters, numerous small scales of mica.

¹⁰⁴ Considerable additions were made, about the forks of the Platte, to our collections of plants. We found here, among others, the *Pentstemon cristatum*, *N. Coronopus dydima*, *Ph. Evolvulus Nuttallianus*, *Roemer*, and *Shultz*. *Orobis dispar*, *Cleome tryphilla*, *Petalostemon candidum*, *Ph.*, and *P. violaceum*. *Aristida pallens*, *N.* two species of a genus approximating to *Holitzia*, several species of *Astragalus*, and many others.—JAMES.

This also is a constituent of the sandstones of the lower secondary or transition formations. The fragments of unmixed and crystalline felspar, which now began to be of frequent occurrence, were considered as the first convincing evidence of the primitive character of the Rocky Mountains. These fragments of felspar, we believed, could have been derived from no other than primitive rocks.

During all the day on the 23d we travelled along the south side of the Platte, our course inclining something more towards the south-west than heretofore.

Intermixed in the narrow fringe of timber, which marks the course of the river, are very numerous trees, killed by the action of the beaver or by the effects of old age; their decorticated and bleached trunks and limbs strongly contrasting with the surrounding objects, many of them rendered doubly [156] interesting by affording a support to the nests of the bald eagle, elevated like a beacon in the horizon of the traveller.

Large herds of bisons were seen in every direction; but as we had already killed a deer, and were supplied with meat enough for the day, none of the party were allowed to go in pursuit of them. Prickly pears became more and more abundant as we ascended the river; and here they occurred in such extensive patches as considerably to retard our progress, it being wholly impracticable to urge our horses across them. The cactus ferox is the most common, and, indeed, the only species which is of frequent occurrence. It has been stated by a traveller to the Upper Missouri,¹⁰⁶ that the antelope, which inhabits the extensive plains of that river and its tributaries, finds means to make this plant, notwithstanding its terrific

¹⁰⁶ Nuttall's *Genera of North American Plants*, vol. i. p. 296.—JAMES.

armature of thorns, subservient to its necessities, "by cutting it up with his hoofs." We were able to discover no confirmation of this statement; it may, however, be applicable to some plains more arid and sterile than any we have passed, where the antelopes may be driven by necessity to the use of this hard expedient.

On the following day we saw immense herds of bisons, blackening the whole surface of the country through which we passed. At this time they were in their summer coat. From the shoulders backwards, all the hinder parts of the animal are covered with a growth of very short and fine hair, as smooth and soft to the touch as a piece of velvet. The tail is very short, and tufted at the end, and its services, as a fly-brush, are confined to a very limited surface.

The fore parts of the body are covered with long shaggy hair, descending in a tuft behind the knee, in a distinct beard beneath the lower jaw, rising in a dense mass on the top of his head as high as the tip of the horns, matted and curled on his front so [157] thickly as to deaden the force of the rifle-ball, which rebounds from the forehead, or lodges in the hair, causing the animal only to shake his head as he bounds heavily onward. The head is so large and ponderous, in proportion to the size of the body, that the supporting muscles, which greatly enlarge the neck, form over the shoulders, where they are imbedded on each side of elongated vertebral processes, distinguished by the name of hump ribs, a very considerable elevation called the hump, which is of an oblong form, diminishing in height as it recedes, so as to give considerable obliquity to the line of the back. The eye is small, black, and piercing; the horns, which are black, and remarkably robust at base, curve outward and upward, tapering rapidly to the tip. The profile of the face is somewhat

convexly curved; and the superior lip, on each side, papillous within, is dilated and extended downward, so as to give a very oblique appearance to the lateral rictus, or gape of the mouth, considerably resembling in this respect the ancient architectural bas-reliefs representing the heads of the ox. The physiognomy is menacing and ferocious, and the whole aspect of the animal is sufficiently formidable to influence the spectator who is, for the first time, placed near him in his native wilds, with certain feelings which indicate the propriety of immediate attention to personal safety.

The bison cow bears the same relation, as to appearance, to the bull, that the domestic cow does to her mate; she is smaller, with much less hair on the anterior part of her body, and though she has a conspicuous beard, yet this appendage is comparatively short; her horns also are much less robust, and not partially concealed by hair.

The dun colour prevails on the coat of the bison; but the long hair of the anterior part of the body, with the exception of the head, is more or less tinged with yellowish or rust colour. The uniformity of [158] colour, however, amongst these animals is so steadfast, that any considerable deviation from the ordinary standard is regarded by the natives as effected under the immediate influence of the Divinity.

A trader of the Missouri informed us that he had seen a grayish-white bison, and that another, a yearling calf, was distinguished by several white spots on the side, and by a white frontal mark and white fore feet.

Mr. J. Dougherty saw in an Indian hut a bison head, very well prepared, which had a white star on the front; the owner valued it highly, calling it his great medicine; he could not be tempted to part with it; "for," said he,

"the herds come every season into the vicinity to seek their white-faced companion."

They are the skins of the cows almost exclusively that are used in commerce; those of the bulls being so large, heavy, and difficult to prepare, that this is comparatively seldom attempted.

That the bison formerly ranged over the Atlantic states there can be no doubt; and Lawson informs us that even in his time some were killed in Virginia; and Cumming, in his *Sketches of a Tour to the Western Country*, informs us that, "long after the country (Kentucky) began to be generally settled, and ceased to be a hunting ground by the Indians," the "buffaloes, bears, and deer, were so plenty in the country that little or no bread was used," and "the facility of gaining them prevented the progress of agriculture, until the poor innocent buffaloes were completely extirpated, and the other wild animals much thinned."¹⁰⁰ This process of extirpation has not since been relaxed, and the bison is now driven beyond the lakes, the Illinois, and southern portion of the Mississippi rivers, their range extending from the country west of Hudson's bay to the northern provinces of Mexico. They have not yet crossed the entire breadth of the mountains at the [159] head of the Missouri, though they

¹⁰⁰ John Lawson, a Scotchman, came to North Carolina about 1700, as surveyor-general; he was killed by the Indians in 1712. His book, *A New Voyage to Carolina*, etc., originally published at London in 1709, ran through several editions, and was reprinted at Raleigh in 1860. "He [the bison] seldom appears amongst the *English* Inhabitants. . . yet I have known some kill'd on the Hilly Part of *Cape-Fair-River*, they passing the Ledges of vast Mountains. . . before they can come near us." [In margin.] "*Two killed one year in Virginia at Appamaticks.*" (See edition of 1714, in Stevens's *Collection of Voyages*, p. 115.)

Cumming's *Tour* is reprinted as volume iv of our series. See p. 177 for passage quoted.—ED.

penetrate, in some parts, far within that range, to the most accessible fertile valleys, particularly the valley of Lewis' river. It was there that Mr. Henry and his party of hunters wintered, and subsisted chiefly upon the flesh of these animals, which they saw in considerable herds; but the Indians affirmed that it was unusual for the bison to visit that neighbourhood.¹⁰⁷

All the mountains which we ascended were more or less strewed with the dung of these animals about the lower parts; a conclusive evidence that this portion of the range had been traversed by the bison.

The cows remain fat from July to the latter part of December. The rutting season occurs towards the latter part of July, and continues until the beginning of September, after which month the cows separate from the bulls, in distinct herds, and bring forth their calves in April. The calves seldom separate themselves from the mother under the age of one year; and cows are often seen accompanied by the calves of three seasons.

The meat of the bison has often been compared with that of the domestic ox, and the preference yielded to the latter, as an article of food. This decision, however, we cannot, from our experience confirm; it appeared to us

¹⁰⁷ Andrew Henry was born in Fayette County, Pennsylvania, between 1773 and 1778, and died in Washington County, Missouri, in 1832. He was one of the original incorporators of the Missouri Fur Company in 1809 and the next year built the first post established by an American trader beyond the crest of the Rockies; this was Fort Henry, on Snake River, probably near the present village of Egin, Fremont County, Idaho. It was abandoned the succeeding spring, but furnished shelter for a few days to the party under Hunt, bound overland to Astoria. (See Bradbury's *Travels*, in our volume v, note 2). Little is known of Henry from 1811 to 1822; at the latter date he entered into partnership with General W. H. Ashley (congressman from Missouri, 1831-37), and for a time prospered in the fur-trade, but lost his fortune by becoming a surety for others.

Lewis River was the name given by Lewis and Clark to Salmon and Snake rivers. Fort Henry was not far from the headwaters of the former.—Ed.

that although of a somewhat coarser fibre, yet, after making due allowance for the situation in which we were placed, our appetites often increased by hunger and privation, that the flesh of the bison is in no degree inferior in delicacy and sweetness to that of the common ox. But that the flesh of those which we were accustomed to eat was more agreeably sapid than that which formed a subject of comparison to the authors alluded to, is altogether possible, as the grass upon which they usually fed was short, firm, and nutritious, considerably differing in its nature from the luxuriant and less solid grass nourished by a fertile soil. It was [160] preferred by the party to the flesh of the elk or deer, which was thrown away when it could be substituted by the bison meat.

To the fat of the bison we conceded a decided superiority over that of the common ox, as being richer and sweeter to the taste.

As our stock of provision was nearly exhausted, permission was given, when we had arrived near a suitable place for our mid-day halt, to the hunters to go out in pursuit of bisons, and in a short time two were killed. The choice parts of these were taken and placed upon pack-horses, to be carried forward to our next encampment, where some of it might be *jerked* on the ensuing day, which was Sunday.

Aside from the vast herds of bisons which it contains, the country along the Platte is enlivened by great numbers of deer, badgers,¹⁰⁰ hares,¹⁰⁰ prairie wolves, eagles, buzzards,¹¹⁰ ravens, and owls: these, with its rare and inter-

¹⁰⁰ *Meles labradoricus*.— JAMES.

¹⁰⁰ *Lepus variabilis*? possibly it may prove to be *L. glacialis* of Leach.— JAMES.

¹¹⁰ *Vultur aura*.— JAMES.

esting plants, in some measure relieved the uniformity of its cheerless scenery. We found a constant source of amusement in observing the unsightly figure, the cumbersome gait, and impolitic movements of the bison; we were often delighted by the beauty and fleetness of the antelope, and the social comfort and neatness of the prairie dog.

- This barren and ungenial district appeared, at this time, to be filled with greater numbers of animals than its meagre productions are sufficient to support. It was, however, manifest that the bisons, then thronging in such numbers, were moving towards the south. Experience may have taught them to repair at certain seasons to the more luxuriant plains of Arkansa and Red river. What should ever prompt them to return to the inhospitable deserts of the Platte, it is not perhaps, easy to conjecture. In whatever [161] direction they move, their parasites and dependants fail not to follow. Large herds are invariably attended by gangs of meagre, famine-pinched wolves, and flights of obscene and ravenous birds.

We have frequently remarked broad shallow excavations in the soil, of the diameter of from five to eight feet, and greatest depth from six inches to eighteen. These are of rare occurrence near the Missouri, as far as Engineer cantonment, and in other districts where the bison is seldom seen at the present day; and when they do exist there, they are overgrown by grass and nearly obliterated. As you approach the country, still the constant residence of these animals, the excavations become more numerous, and are less productive of grass. They now are so numerous as to be of constant recurrence, offering a considerable impediment to the traveller, who winds his way amongst them, and are entirely destitute

of grass, their surface being covered with a deep dust. Until recently, we had no opportunity to observe the cause which gives rise to these appearances; but we were now convinced that they were the result of the habit which the bulls have, in common with the domestic bull, of scraping up the earth with their fore feet, in the process of dusting themselves: they serve also as places for rolling and wallowing; a gratification which the bison bull indulges in as frequently, and in the same manner as the horse.

Some extensive tracts of land along the Platte, particularly those portions which are a little elevated, with an undulating or broken surface, are almost exclusively occupied by a scattered growth of several species of wormwood, (*artemisia*) some of which are common to this country, and that on the lower Missouri: we may enumerate the following — *A. ludoviciana*, *A. longifolia*, *A. serrata*, *A. columbiensis*,¹¹¹ [162] *A. cernua*, *A. canadensis*; most of these species have simple or finely divided compound leaves, which are long and slender, and canescent, like those of the *A. absinthium*, the common wormwood of the gardens. The peculiar aromatic scent, and the flavor of this well known plant, is recognized in all the species we have mentioned. Several of them are eaten by the bisons, and our horses were sometimes reduced to the necessity of feeding upon them.

The intense reflection of light and heat from the surface of many tracts of naked sand, which we crossed, added much to the fatigue and suffering of our journey. We often

¹¹¹ *A. columbiensis*. This is said to be the plant known to the party of Lewis and Clarke, by the name of "wild sage." It occurs abundantly in the barren plains of the Columbia river; where it furnishes the sole article of fuel or of shelter to the Indians who wander in those woodless deserts. See Nuttall's *Genera*, vol. ii. p. 142.— JAMES.

met with extensive districts covered entirely with loose and fine sand blown from the adjacent hills. In the low plains along the river, where the soil is permanent, it is highly impregnated with saline substances, and too sterile to produce any thing except a few stunted carices and rushes.

On the evening of the twenty-fourth, after we had encamped, several bull bisons, being on the windward side, came so near us as to create a disturbance among our horses, who were not yet so familiarized to the formidable appearance of those animals, as to regard their near approach with indifference. The bulls at length became troublesome, approaching so near to smell at the horses, that some of the latter broke the cords by which they were fastened, and made their escape. A man was then sent to frighten away the bisons, who, in their turn, exhibited as much terror as they had occasioned to our horses.

On Sunday, the twenty-fifth, we remained encamped, and some of the men were employed in drying a part of the meat killed on the preceding day. [163] This was done that we might be able to carry constantly with us a small supply of provisions, in reserve against any occasion when we might not meet with game.

The magnetic variation equated from two sets of observations, was found to be 14° east. Observations for longitude were made; it was also attempted to take the meridian altitude of Antares for ascertaining the latitude, but the observation was commenced a few minutes too late, we having been longer occupied in making the preceding observations than we had anticipated.¹¹³

¹¹³ There is a considerable error in the longitude of points in western Nebraska and Colorado as given on the map of the expedition. For example, the longitude

26th. The weather had now been for some days fair. As we approached the mountains, we felt or fancied, a very manifest change in the character of the weather, and the temperature of the air. Mornings and evenings were usually calm, and the heat more oppressive than in the middle of the day. Early in the forenoon, a light and refreshing breeze often sprung up, blowing from the west or south-west, which again subsided on the approach of night. This phenomenon was so often observed that we were induced to attribute it to the operation of the same local cause, which in the neighbourhood of the sea, produces a diurnal change in the winds, which blow alternately to and from the shore. The Rocky Mountains may be considered as forming the shore of that sea of sand, which is traversed by the Platte, and extends northward to the Missouri, above the great bend.

The rarefaction of the air over this great plain, by the reverberation of the sun's rays during the day, causes an ascending current, which is supplied by the rushing down of the condensed air from the mountains. Though the sun's rays in the middle of the day were scorching and extremely afflictive to our eyes, the temperature of the air, as indicated by the thermometer, had hitherto rarely exceeded 80° Fah.

[164] In the forenoon we passed a range of hills more elevated than any we had seen west of the Missouri. These hills cross the Platte from north to south, and though

of the town of North Platte, at the confluence of the forks of the Platte, is 100° 45' 53"; while on the accompanying map the one hundred and second meridian runs but little west of the spot. For this reason, and because of the few landmarks described, the location of the camps of the expedition can only be approximated; but that of June 26 must have been quite near the Nebraska-Colorado boundary. The South Platte leaves Colorado almost exactly at the northeastern corner of the state.— Ed.

inconsiderable in magnitude, they can be distinguished extending several miles on each side of the river. They consist principally of gravel, intermixed with small water-worn fragments of granite and other primitive rocks, but are based on a stratum of coarse friable sand-stone, of a dark gray colour, which has been uncovered, and cut through by the bed of the Platte.

This range may perhaps be a continuation or spur from the black hills mentioned by Lewis and Clarke, as containing the sources of the Shienne, and other tributaries to the Missouri, at no great distance to the north of the place where we now were.¹¹³

At evening we arrived at another scattering grove of cotton-wood trees, among which we placed our camp, immediately on the brink of the river. The trees of which these insulated groves are usually composed, from their low and branching figure, and their remoteness from each other, as they stand scattered over the soil they occupy, revived strongly in our minds the appearance and gratifications resulting from an apple orchard; for which from a little distance they might readily be mistaken, if seen in a cultivated region. At a few rods distant on our right hand, was a fortified Indian camp, which appeared to have been recently occupied. It was constructed of such broken half-decayed logs of wood as the place afforded, intermixed with some skeletons of bisons recently killed. It is of a circular form, enclosing space enough for about

¹¹³ The name "Black Hills," which is now associated with the mountains of southwestern South Dakota, has also been applied somewhat indefinitely to hills in Nebraska, Wyoming, and Colorado. Lewis and Clark's map places hills so named along the eastern side of the North Platte, running well into Nebraska. The name is sometimes given to the hills enclosed by the circular course of the North Platte, in southeastern Wyoming; while Frémont (1842) applies it to the hills through which Cache la Poudre River cuts its way to the South Platte.— Ed.

thirty men to lie down upon. The wall is about five feet high, with an opening towards the east, and the top uncovered.

At a little distance in front of the entrance of this breastwork, was a semicircular row of sixteen bison skulls, with their noses pointing down the river. Near the centre of the circle which this row would [165] describe, if continued, was another skull marked with a number of red lines.

Our interpreter informed us that this arrangement of skulls and other marks here discovered, were designed to communicate the following information, namely, that the camp had been occupied by a war party of the Skeeeree or Pawnee Loup Indians, who had lately come from an excursion against the Cumancias, Ietans, or some of the western tribes. The number of red lines traced on the painted skull indicated the number of the party to have been thirty-six; the position in which the skulls were placed, that they were on their return to their own country. Two small rods stuck in the ground, with a few hairs tied in two parcels to the end of each, signified that four scalps had been taken.

A record of facts, which may be important and interesting to others, is thus left for the benefit of all who may follow. For our part we were glad to be informed, that one lawless and predatory band of savages had lately left the country we were about to traverse. We were never without some anxiety on the subject of Indian war-parties; who are known frequently to remunerate themselves for any discomfiture or loss they may have sustained, by making free booty of the property and the scalps of the first weak or unguarded party they may meet.

At a late hour in the night, after our camp had become

quiet, we were suddenly awakened by a loud rushing noise, which in a moment seemed to reach the centre of our encampment; immediately a piercing exclamation of terror was heard from one of our interpreters, which, from the peculiarity of its tone, seemed to have escaped from a throat under the grasp of death. It became immediately apparent that the cause of the alarm proceeded from our horses, all of whom had broken loose from their stakes, near the Indian fort, and had run in a state of fright through our camp, with the apparent desire to gain our protection [166] against something in their rear. We proceeded in a cautious manner to reconnoitre the environs of the camp, stooping low, in order that the eye might be directed along the level of the top of the

- grass, which was here of a very luxuriant growth, in order
- to detect in the gloom, any inimical object that might rise above it; having thus convinced ourselves that nothing dangerous to our safety remained very near to us, the horses were again secured, and we betook ourselves to our beds, with the reflection, that they had probably been alarmed by the too near approach of bisons.

We had scarce fallen asleep, when we were aroused the second time, by the discharge of a gun close to our tent. This was the signal which we had all understood was to be given by the sentinel, in case of the hostile approach of Indians to the camp. We therefore bestirred ourselves, being well assured we had other business at hand, than the securing of horses. Several of the party went to reconnoitre the old fort above mentioned, but nothing was discovered and they returned.

After all were assembled at camp, Major Long informed us the alarm had been given by his order, and was in-

tended to test the coolness and self-possession of the party, and to prepare us in some measure for an unpleasant occurrence, we all thought too likely to happen, which was no other than a serious attack from the Indians, to be made according to their custom at that highly unseasonable hour of the morning.

Since leaving the Missouri, we had never indulged a disposition to sluggishness, accustoming ourselves to rise every morning long before the sun; but we still found we left that small spot of earth, on which we had rested our limbs, and which had become warm and dry by the heat of our bodies, with as much reluctance as we have felt at quitting softer beds.

[167] The mode of rallying now prescribed was the following; immediately after an alarm should be given, the party should seize their arms, and form in front of the tents, in the rear of the line of packs, and await any orders that might be given. The sentinel giving the alarm should proceed to the tent of the officers, in order to acquaint them with the cause. Major Long and Captain Bell should reconnoitre about the encampment, and if practicable ascertain the real occasion of the alarm. Farther movements to be regulated as the emergency might require.

This alarm was the occasion of our starting on the morning of the 26th at an earlier hour than usual. We rode on through the same uninteresting and dreary country as before, but were constantly amused at observing the motions of the countless thousands of bisons, by which we were all the time surrounded. The wind happening to blow fresh from the south, the scent of our party was borne directly across the Platte, and we could distinctly note every step of its progress through a distance

of eight or ten miles, by the consternation and terror it excited among the buffaloes. The moment the tainted gale infected their atmosphere, they ran with as much violence as if pursued by a party of mounted hunters, and instead of running from the danger, turned their heads towards the wind; eager to escape from the terrifying scent, they pushed forward in an oblique direction towards our party, and plunging into the river they swam and waded, and ran with the utmost violence, in several instances breaking through our line of march, which was immediately along the left bank of the Platte.

It is remarked by hunters, and appears to be an established fact, that the odour of a white man is more terrifying to wild animals, particularly the bison, than that of an Indian. This animal, in the course of its periodic migrations, comes into the immediate [168] neighbourhood of the permanent Indian villages, on the Missouri and the Platte. One was seen by our hunters within six miles of the Grand Pawnee village, and immediately about the towns we saw many heads and skeletons of such as had been killed there the preceding spring. They had come in while the Pawnees were absent on their winter's hunt, and at their return, we were informed, they found the bisons immediately about their villages. They disappeared invariably from the neighbourhood of the white settlements within a few years. We are aware that another cause may be found for this than the frightful scent of the white man, which is, the impolitic exterminating war which he wages against all unsubdued animals within his reach.

It would be highly desirable that some law for the preservation of game might be extended to, and rigidly enforced in the country where the bison is still met with;

that the wanton destruction of these valuable animals, by the white hunters, might be checked or prevented. It is common for hunters to attack large herds of these animals, and having slaughtered as many as they are able, from mere wantonness and love of this barbarous sport, to leave the carcasses to be devoured by the wolves and birds of prey; thousands are slaughtered yearly, of which no part is saved except the tongues. This inconsiderate and cruel practice is undoubtedly the principal reason why the bison flies so far and so soon from the neighbourhood of our frontier settlements.

It is well known to those in the least degree conversant with the Indians, that the odour which their bodies exhale, though very strong and peculiar, is by no means unpleasant,¹¹⁴ at least to most persons. A negro in the employment of the Missouri Fur Company, and living at Fort Lisa, was often heard to complain of the intolerable scent of the squaws; in like manner, the Indians find the odour of a white man extremely offensive. In the language of the [169] Peruvian Indians, are three words to express their idea of the smell of the European, the aboriginal American, and the negro. They call the first *Pezuna*, the second *Posco*, and the third *Grajo*.¹¹⁵

After passing the range of hills above mentioned, the surface subsides nearly to a plain, having, however, manifestly a greater inclination than below. The velocity of the current of the river is much increased, the bed

¹¹⁴ We may add on this subject the testimony of Lawson, the early historian of North Carolina. After describing the huts of the native inhabitants, he adds, "These dwellings are as hot as stoves, where the Indians sleep and sweat all night; yet I never felt any ill unsavory smell in their cabins, whereas should we live in our houses as they do, we should be poisoned with our own nastiness; which confirms the Indians to be, as they really are, some of the sweetest people in the world." *New Voyage to Carolina*, p. 177. London, 4to. 1709.—JAMES.

¹¹⁵ See Humboldt's *New Spain*, vol. i. p. 184.—JAMES.

narrower, and the banks more precipitous. We passed several extensive tracts nearly destitute of vegetation. The surface of these consisted entirely of coarse sand and gravel, with here and there an insulated mass of clay, highly impregnated with salt, and gnawed and licked into various singular shapes, exhibiting the forms of massive insulated columns, huge buttresses, prominent angles, and profound excavations, fortuitously mingled, and which are now gradually diminishing, under the action of the cause which produced them. The present surface upon which they repose, seems to be a stratum of a different earth, which does not afford the condiment so attractive to the animals; the consequence is, that the licking and chewing, principally, heretofore, affecting the surface on which the animal stood, is now directed against the upright portions of this singular grand excavation, and most remarkable of all known salt-licks.

Some extensive portions of the immediate bottom land, along the river, were white with an effloresced salt, but this being impure and but imperfectly soluble, did not appear to have been licked.

Towards evening we passed two springs of transparent, but impure and brackish water. They were the first we had met with on the Platte.¹¹⁸ Among a considerable number of undescribed plants collected on the 27th, are three referable to the family of the rough-leaved plants (*asperifoliæ*), one of them belonging [170] to a genus not heretofore known in the United States. It has a salver-form corolla, with a large spreading angular, plaited border. Another plant very conspicuously orna-

¹¹⁸ There are a number of springs in the ravines south of the Platte between Ogallala, Nebraska, and Julesburg, Colorado. During this day's march, the party doubtless crossed the Nebraska-Colorado line.—ED.

mental to these barren deserts, is a lactescent annual, belonging to the family of the convolvulacæ, with a bright purple corolla, as large as that of the common stramonium. We also observed the white-stalked primrose, (*œnothera albicaulis*, N.) a very small white-flowered species of talinum, and some others. We observed, in repeated instances, several individuals of a singular genus of reptiles (*chirotes*, Cuv.) which in form resemble short serpents, but are more closely allied to the lizards, by being furnished with two feet. They were so active, that it was not without some difficulty that we succeeded in obtaining a specimen. Of this (as was our uniform custom, when any apparently new animal was presented) we immediately drew out a description. But as the specimen was unfortunately lost, and the description formed part of the zoological notes and observations, which were carried off by our deserters, we are reduced to the necessity of merely indicating the probability of the existence of the *chirotes lumbricoides* of naturalists, within the territory of the United States.

At night we were again alarmed by a disturbance among our horses, of which we were not able to ascertain the cause. Some of the party had, on the preceding day, reported that they had seen Indians at a distance, that they were on horseback, &c. but of this there could be no certainty, the imagination often representing a herd of antelopes, or other animals, seen at a distance, and perhaps distorted by the looming of the prairie, as so many mounted Indians. We had often found ourselves more grossly abused by our eye-sight, than is supposed in this instance, having mistaken turkies for bisons, wolves for horses, &c.

28th. We breakfasted, and left our encampment [171]

before five o'clock. We had not proceeded far when we discovered about thirty wild horses at a distance before us. They had taken our scent, and run off in a fright, when we were a mile distant. Their activity and fleetness surpassed what we had expected from this noble animal in his savage state. In the course of the day we saw other herds, but all at a distance. The country south of the Platte contains, as we are informed, vast numbers of horses. They are of the domesticated stock introduced by the Spaniards, but they multiply rapidly in their present state of regained freedom, and are apparently wilder than any of the native occupants of this country. They are of various colours, and of all sizes, there being many colts, and some mules, among them. Their playfulness, rather than their fears, seemed to be excited by our appearance, and we often saw them, more than a mile distant, leaping and curvetting, involved by a cloud of dust, which they seemed to delight in raising.

About some sandy ridges, which we passed in the middle of the day, several miliary rattle-snakes were seen, two of which were killed. These had been occasionally met with all along the Platte, but were by no means numerous. Mr. Peale killed a female antelope, without leaving our line. The animal had not been able to satisfy its curiosity, and stood at a little distance gazing at us, until it was shot down.

During the day we passed three small creeks discharging into the Platte from the north-west. One of these, called by the Indians Bat-so-ah, or Cherry creek, heads in the Rocky Mountains.¹¹⁷ On these creeks are a few small

¹¹⁷ Cherry Creek is probably the modern Pawnee Creek, of Logan County, Colorado. The statement in the text relative to its source is misleading, as no stream debouching in this vicinity heads so far west; the heads of the several branches of Cherry Creek are all in eastern Weld County, many miles from the mountains proper. Frémont camped near Cherry Creek on July 7, 1843.— Ed.

cotton-wood and willow trees. These trees, as well as all those along the Platte, are low, with very large and branching tops, as is the case with all trees which grow remote from each other.

In the afternoon hunters were sent forward, but it was not without some difficulty that a single bison [172] was killed, those animals having become much less frequent.¹¹⁸

¹¹⁸ A small fox was killed, which appears to be the animal mentioned by Lewis and Clarke, in the account of their travels, under the name of the *burrowing fox*, (vol. ii. p. 351.) It is very much to be regretted, that although two or three specimens of it were killed by our party, whilst we were within about two hundred miles of the mountains, yet from the dominion of peculiar circumstances, we were unable to preserve a single entire skin; and as the description of the animal taken on the spot was lost, we shall endeavour to make the species known to naturalists, with the aid of only a head and a small portion of the neck of one individual, and a cranium of another, which are now before us.

In magnitude, the animal is hardly more than half the size of the American red fox, (*Canis Virginianus*, of the recent authors,) to which it has a considerable resemblance. But, that it is an adult, and not the young of that species, the presence of the large carnivorous tooth, and the two posterior molar teeth of the lower jaw, on each side, sufficiently attest; these teeth, as well as all the others, being very much worn down, prove that the milk teeth have been long since shed.

The teeth, in form, correspond to considerable exactness with those of our red fox; but the anterior three and four false molars of both these species are sufficiently distinguished from the corresponding teeth of the gray, or tri-coloured fox (*C. cinereo-argenteus*) by being wider at base, and less elongated perpendicularly, and by having the posterior basal lobe of each, longer and much more distinctly armed with a tubercle at tip.

Besides this disparity of dentition in the red and gray foxes, the general form of the cranium, and its particular detailed characters, as a less elevated occipital, and temporal crest, more profoundly sinuous junction of the malar with the maxillary bone, the absence of elevated lines bounding the space between the insertions of the lateral muscles, passing in a slightly reclinate direction between the orbital processes, and the anterior tip of the occipital crest, and in particular the want of an angular process of the lower jaw beneath the spinous process in the cranium of the red fox, are sufficiently obvious characters to indicate even by this portion of the osseous structure alone, its specific distinctness from the gray fox. In these differences the osteology of the burrowing fox equally participates, and although besides these characters in common with the red fox, we may observe a correspondence in many other respects, yet there are also many distinctions which the cranium of this small species will present, when more critically compared with that well known animal, which unequivocally forbid us from admitting their identity. The common elevated space on the parietal bones between the insertions of the lateral muscles is one-fourth wider, and extends

Our small stock of bread was by this time so nearly exhausted, that it was thought prudent to reserve the remainder as a last resort, in case of the failure of a supply of game, or other accident. A quantity of parched maize, equal to a gill per day, to each man, was daily distributed to each of the three messes into which the party was divided. This was thrown into the kettle where the bison meat was boiled, and supplied the place of barley in the soup, always the first and most important dish.

further backward, so as to embrace a notable portion of the anterior angle of the sagitto-occipital crest; the recipient cavity in the inferior jaw for the attachment of the masseter muscle is more profound, and the coronoid process, less elevated than the top of the zygomatic arch, is more obtusely rounded at tip than that of the red fox.

The dimensions of the cranium, as taken by the calipers:

The entire length from the insertion of the superior incisors to the tip of the occipital crest, is rather more than four inches and three-tenths. The least distance between the orbital cavities, nine-tenths. Between the tips of the orbital processes less than one inch and one-tenth. Between the insertions of the lateral muscles, at the junction of the frontal and parietal bones, half an inch. Greatest breadth of this space on the parietal bones thirteen-twentieths of an inch.

The hair is fine, dense, and soft. The head above is fulvous, drawing on ferruginous, intermixed with gray, the fur being of the first-mentioned colour, and the hair whitish at base; then black; then gray; then brown. The ridge of the nose is somewhat paler, and a more brownish dilated line passes from the eye to near the nostrils, (as in the *C. corsac*). The margin of the upper lip is white; the orbits are gray; the ears behind are paler than the top of the head, intermixed with black hairs and the margin, excepting at tip, white; the inner side is broadly margined with white hairs; the space behind the ear is destitute of the intermixture of hairs; the neck above has longer hairs, of which the black and gray portions are more conspicuous; beneath the head pure white.

The body is slender, and the tail rather long, cylindrical, and black.

It runs with extraordinary swiftness, so much so, that when at full speed, its course has been by the hunters compared to the flight of a bird skimming the surface of the earth. We had opportunities of seeing it run with the antelope; and appearances sanctioned the belief, that in fleetness it even exceeded that extraordinary animal, famed for swiftness, and for the singularity of its horns. Like the corsac of Asia it burrows in the earth, in a country totally destitute of trees or bushes, and is not known to dwell in forest districts.

If Buffon's figure of the corsac is to be implicitly relied upon, our burrowing fox must be considered as perfectly distinct, and anonymous; we would, therefore, propose for it the name of *velox*.— JAMES.

Whenever game was plenty we had a variety of excellent dishes, consisting of the choice parts of the bison, the tongue, the hump ribs, the marrow-bones, &c. dressed in various ways. The hump ribs of the bison, which many epicures prefer to any other part of the animal, are the spinous processes of the backbone, and are from eighteen to twenty-four inches in length. They are taken out with a small portion of the flesh adhering to each side, and whether roasted, boiled, or stewed, are certainly very far superior to any part of the flesh of the domestic ox.

29th. We had proceeded but a few miles from our camp when it was found that Mr. Say's horse was so far exhausted as to be unable to proceed at the same pace as the other horses. Mr. Say accordingly dismounted, and by driving his horse before him, urged the animal along for a few miles; but this being found too laborious, and as several of the horses were near failing, it was determined to halt, which we did at ten o'clock, and remained in camp during the day.

The country, for several miles to the west of the range of hills mentioned above, is as uniformly plain as that on any part of the Platte. It differs from that further to the east only in being of a coarser sand, and in an aspect of more unvaried sterility. The cactus ferox reigns sole monarch, and sole possessor [173] of thousands of acres of this dreary plain. It forms patches which neither a horse nor any other animal will attempt to pass over. The rabbit's foot plantation, and a few brown and withered grasses, are sparingly scattered over the intervening spaces. In depressed and moist situations, where the soil is not so entirely unproductive, the variegated spurge (*euphorbia variegata*), with its painted involucre and party-col-

oured leaves, is a conspicuous and beautiful ornament. The *lepidium virginicum*, distributed over every part of northern and equinoctial America, from Hudson's Bay to the summit of the Silla of Caraccas,¹¹⁸ is here of such diminutive size that we were induced to search, though we sought in vain, for some character to distinguish it as a separate species.

At three o'clock P. M. the planet Venus was distinctly visible. Its distance from the sun at 3h. 45m. was east $36^{\circ} 15'$. There were a few broken cumulostratose clouds from the south-west, otherwise the sky was clear, and near the zenith, where the star was seen, of a deep and beautiful azure. Our actual elevation, at this time, must have been considerable, and might be supposed to effect, in some degree, the transparency of our atmosphere.

Several magpies were seen about the islands in the river, where it is probable they rear their young.

On the 30th we left the encampment at our accustomed early hour, and at eight o'clock were cheered by a distant view of the Rocky Mountains. For some time we were unable to decide whether what we saw were mountains, or banks of cumulous clouds skirting the horizon, and glittering in the reflected rays of the sun. It was only by watching the bright parts, and observing that their form and position remained unaltered, that we were able to satisfy ourselves they were indeed mountains. They were visible from the lowest parts of the plain, and [174] their summits were, when first discovered, several degrees above our horizon. They became visible by detaching themselves from the sky beyond, and not by emerging from beneath the sensible horizon, so that we might have seen them from a greater distance had it not been for the want

¹¹⁸ See Humb. *Pers. Nar.* vol. iii. p. 500.—JAMES.

of transparency in the atmosphere. Our first views of the mountains were indistinct, on account of some smokiness of the atmosphere, but from our encampment, at noon, we had a very distinct and satisfactory prospect of them. A small part only of the intervening plain was visible, the convexity of the surface intercepting the view from the base of the mountains, and that portion of the plain adjacent to it.

Snow could be seen on every part of them which was visible above our horizon.

The thermometer immersed in the water of the river fell from 80° , the temperature of the atmosphere, to 75° . Observations had been made daily to ascertain the temperature of the water of the Platte.¹²⁹ Notwithstanding there were only about five degrees of difference between the temperature of the air and that of the water, it was remarked by several of the party, that a sensation of extreme cold was felt on passing from the one to the other.

It is possible, that at the elevation we had now attained, the rapidity of evaporation, on account of the diminished pressure of the atmosphere, might be something greater than we had been accustomed to. For several days the sky had been clear, and in the morning we had observed an unusual degree of transparency in every part of the atmosphere. As the day advanced, and the heat of the sun began to be felt, such quantities of vapour were seen to ascend from

¹²⁹ The results of several observations are as follows:

Temperature of the water.					Temperature of the air.				
June 27, 68°	83°
28, 70	79
29, 74	82
30, 75	80
July 1, 71	60

At eleven, A. M.

Before sunrise the mercury fell usually as low as 60° .— JAMES.

every part of the plain, that all objects, at a little distance, appeared magnified, and variously distorted. An undulating or tremulous motion in ascending lines was manifest over every part of the [175] surface. Commencing soon after sunrise it continued to increase in quantity until the afternoon, when it diminished gradually, keeping an even pace with the intensity of the sun's heat. The density of the vapour was often such as to produce the perfect image of a pool of water in every valley upon which we could look down at an angle of about ten degrees. This effect was several times seen so perfect and beautiful as to deceive almost every one of our party. A herd of bisons, at the distance of a mile, seemed to be standing in a pool of water; and what appeared to us the reflected image was as distinctly seen as the animal itself. Illusions of this kind are common in the African and Asiatic deserts, as we learn from travellers, and from the language of poets. They are called by the Persians *sirraub*, "water of the desert;" and in the Sanscrit language, *Mriga trichna*, "the desire or thirst of the antelope." Elphinstone relates,¹²¹ that at Moujgur, in the kingdom of Caubul, towards evening many persons were astonished at the appearance of a long lake enclosing several little islands. Notwithstanding the well known nature of the country, which was a sandy desert, many were positive that it was a lake, and one of the surveyors took the bearings of it. "I had im-

¹²¹ Mission to Caubul, p. 179. 4to. Lond.—JAMES.

Comment by Ed. Mountstuart Elphinstone (1779-1859), fourth son of the eleventh Baron Elphinstone of the Scottish peerage, was a notable official in the East Indian service, which he entered in 1796. In 1808 he was placed at the head of an embassy sent to Cabul to secure the alliance of the Afghans against a threatened French invasion. The work referred to, *An Account of the Kingdom of Cabul and its Dependencies in Persia and India* (London, 1815), was one result of the mission. Elphinstone returned to England about 1830, declining the governor-generalship of India.

agined," says he, "this phenomenon to be occasioned by a thin vapour which is spread over the ground in hot weather in India, but this appearance was entirely different, and on looking along the ground no vapour whatever could be perceived. The ground was quite level and smooth, and the weather very hot. It is only found in level, smooth, and dry places; the position of the sun, and the degree of heat, are not material, for it was afterwards seen in Damaun, when the weather was not hotter than in England." On the frontier of Caubul, Elphinstone saw what he calls a most magnificent mirage, [176] which looked like an extensive lake, or a very wide river. The water seemed clear and beautiful, and the figures of two gentlemen, who rode along it, were *reflected as distinctly as in real water*. "It is common in our own country," says the London Monthly Review, "for ground-mists to assume the appearance of water, to make a meadow seem inundated, and to change a valley into a lake; but these mists never reflect the surrounding trees and hills. Hence, the *mirage* must consist of a peculiar gas, of which the particles are combined by a stronger attraction of cohesion than the vapours of real water; the *liquor silicum* of the alchymists is described as exhibiting, in some circumstances, this glassy surface, yet as being equally evanescent."¹²³ It is afterwards suggested, in the same paper, that the gas which occasioned these extraordinary reflections, may probably be the substance of the pernicious wind called Si-moom. The explanation here offered will not probably be thought satisfactory. It seems to belong to the epoch of great and brilliant discoveries in pneumatic chymistry, when "a peculiar gas" was thought the agent of every phenomenon.

¹²³ See Monthly Review for May 1817. p. 3.—JAMES.

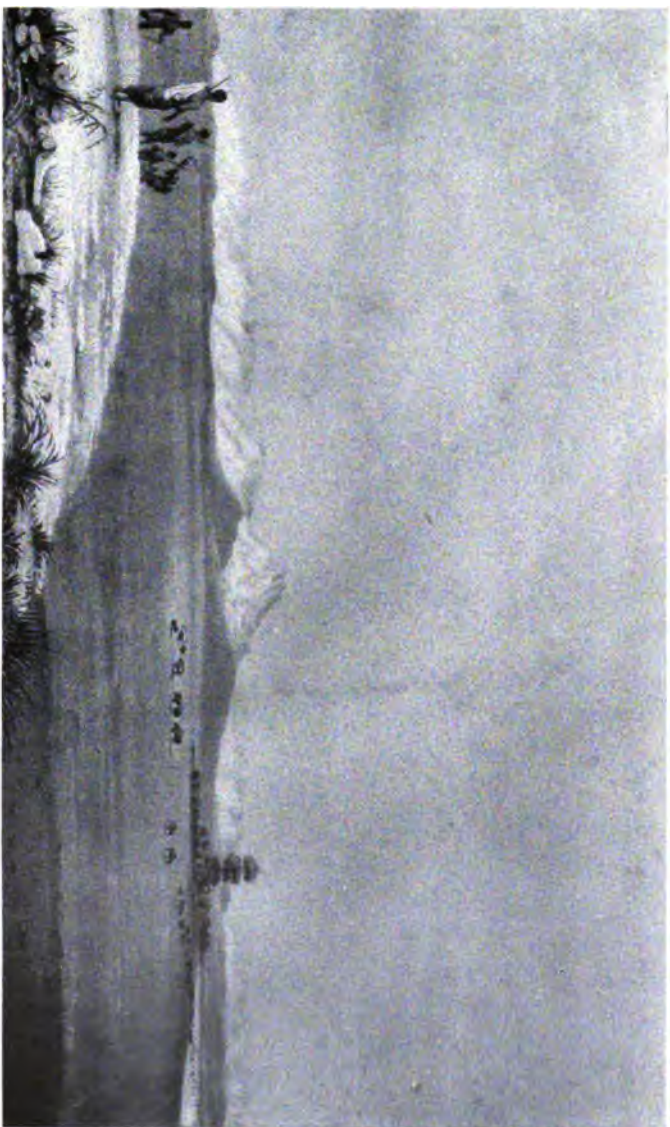
The images of pools of water, which we saw in the
 • deserts of the Platte, appeared to us similar to those mentioned by Elphinstone, likewise to those observed by Niebuhr¹²³ in Arabia, where inverted images were seen.

To the more common effects of light passing through a medium charged with vapours, we had become familiar. We had, for many days, seen the low bluffs of the valley of the Platte suspended over the verge of our apparent horizon, as distant capes are suspended over the sea; but in viewing these perfect images of lakes, we could scarce believe they were occasioned by *refraction*, to which the phenomena of mirage have usually been attributed.¹²⁴ [177] The circumstance that these pools could only be seen when we looked down at a considerable angle upon some valley; the perfect manner in which the image of the sky was returned from the surface, and the inverted position of the objects seen, induced us to inquire whether the effect might not be produced by reflection from the lower stratum of watery vapour.¹²⁵ These appearances are sufficient to justify the conclusion that the quantity of evapora-

¹²³ Karsten Niebuhr (1733-1815) was a Danish scientist and traveller, who visited Egypt, Arabia, India, Palestine, and Syria during the years 1761-67. The first volume of his travels, *Beschreibung von Arabien* (Copenhagen, 1772), was published by the Danish government; the second and third volumes appeared in 1774 and 1778, bearing the title *Reisebeschreibung von Arabien und anderen umliegenden Ländern*; while a fourth was brought out in 1837, by Niebuhr's daughter.—ED.

¹²⁴ See Humb. Pers. Nar. vol. ii. p. 196. vol. iii. pp. 358. 542. —JAMES.

¹²⁵ Rays of light, falling with any degree of obliquity upon the particles of that portion of watery vapour which lies near the surface of the earth, may be reflected, and pass off at an equal corresponding angle; so that if the eye be raised a few feet above the reflecting surface, an image of the corresponding arc of the sky is produced, as in the case of a sheet of water where the image, seen by the reflected light, is not that of the water, but the sky. Hence any object, which obstructs the rays of light in their passage from the parts of the atmosphere beyond the reflecting surface to that surface, is returned to the eye in a darkened image as from water.—JAMES.



Distant View of the Rocky Mountains

tion is much greater here than in less elevated districts of country, where such things are not seen.

Towards evening the air became more clear, and our view of the mountains was more satisfactory, though as yet we could only distinguish their grand outline, imprinted in bold indentations upon the luminous margin of the sky. We soon remarked a particular part of the range divided into three conic summits, each apparently of nearly equal altitude. This we concluded to be the point designated by Pike as the highest peak. Its bearing was taken a short time before we halted for the evening, and found to be south, 73° west.¹²⁶ As we were about to encamp, some of the party went in pursuit of a herd of bisons, one of which they killed, and returned to camp a little before sunset.

July 1st. Although the temperature indicated by the thermometer for several days had been about 80° , in the middle of the day, the heat, owing to the cool breezes from the mountain, had been by no means oppressive. On the night of the 30th of June, the mercury fell to 55° , and on the following morning the air was chilly, and a strong breeze was felt before sunrise, from the south-east. We left our camp at a very early hour, and travelled over a tract differing in no respect but its greater barrenness from that passed on the preceding day. We halted to dine at the distance of sixteen and a half miles. Many acres of this plain had not vegetation enough to communicate [178] to the surface the least shade of green; a few dwarfish sun-

¹²⁶ The party mistook this "highest peak" for Pike's Peak. This mountain, called by the French trappers *Les deux Oreilles* (Two Ears), is the one now known as Long's Peak, being named for Major S. H. Long, the leader of our party. Frémont found in 1842 that this name had been adopted by the traders, and had become familiar in the country. The elevation of Long's Peak is 14,271 feet, exceeding that of Pike's Peak by one hundred and twenty-four feet.—ED.

flowers and grasses, which had grown here in the early part of the summer, being now entirely withered and brown. In stagnant pools near the river, we saw the common arrow head, (*sagittaria sagittifolia*,) the *alisma* plantago, and the small *lemna* growing together, as in similar situations in the eastern states.

A striking feature of that part of the plain country, we were now passing, is formed by innumerable ant-heaps, rising from twelve to eighteen inches above the common level of the surface. They occur with some uniformity, at intervals of about twenty feet, and are all similar in size and dimensions. They consist so entirely of small grains of flesh-coloured felspar, that they have, all of them, an uniform reddish aspect, and it is not without careful examination, that any other kind of gravel can be detected in them. The entrance to the interior of each of these little mounds is uniformly on the eastward side, and very rarely occurs beyond the boundaries of N. E. and S. E. It is never at the top, nor on a level with the surface of the soil, but is a little elevated above it. It seems highly probable, that the active little architects thus place the entrance of their edifice on the eastward side, in order to escape the direct influence of the cold mountain winds.

At three o'clock, as we were about to resume our journey, there came on a gentle shower of rain, with wind at east, and low broken clouds. In the afternoon we passed some small ridges of sandstone crossing the river from north to south, but very inconsiderable in point of elevation and extent. We travelled this day twenty-seven miles, directly towards the base of the mountains, but they appeared almost as distant in the evening as they had done in the morning. The bearing of the high peak above mentioned, from our encampment, was south, 75° west.

[179] The ensuing day being Sabbath, was devoted to rest. About our camp, which was in the most fertile spot we could select, in a ride of several miles, there was but a very insufficient supply of grass for our horses. A species of cone flower, (*rudbeckia columnaris*, N.) was here beginning to expand. The showy *R. purpurea*, very common on the Missouri, and the lower part of the Platte, does not extend into the desolate regions. The common purslane (*portulacca oleracea*) is one of the most frequent plants about the base of the Rocky Mountains, particularly in places much frequented as licks by the bisons and other animals.

From this encampment, we had a plain but still distant view of the mountains. No inequality occurs in the surface of the subjacent country on the east of the mountains, so that our view was wholly unobstructed. They stretched from north to south like an immense wall, occupying all that portion of the horizon lying to the north-west, west, and south-west. We could now see the surface of the plain, extending almost unvaried to the base of the first ridge, which rises by an abrupt ascent above the commencement of the snow.

A set of observations for longitude was commenced in the morning, but the weather becoming cloudy, we were prevented from completing them. In the afternoon a storm came on from the north, which continued during the night. Much rain fell, accompanied with thunder and high but variable winds. Between twelve o'clock and sunset, the mercury in Fahrenheit's thermometer fell nineteen degrees, from 89° to 60°.

3d. Breakfast was despatched, and we had mounted our horses before five o'clock. We were enabled to have our breakfast thus early, as the sentinel on duty during the

night, was directed to put the kettles over the fire at three o'clock, all the processes preparatory [180] to boiling having been finished on the preceding evening.

- As we approached the mountains, wood became much more abundant along the Platte. We had often heard our guide, in speaking of the country, two or three days' journey from the mountains, mention the Grand Forest, and were a little surprised on arriving at it, to find no more than a narrow but uninterrupted stripe of timber, extending along the immediate banks of the river, never occupying the space of half a mile in width.

For several days the direction of our course in ascending the Platte, had inclined considerably to the south, varying from due west to south, 20° west.

In the course of the day, we passed the mouths of three large creeks, heading in the mountains, and entering the Platte from the north-west. One of these, nearly opposite to which we encamped, is called Potera's creek, from a Frenchman of that name, who is said to have been bewildered upon it, wandering about for twenty days, almost without food. He was then found by a band of Kiawas, who frequent this part of the country, and restored to his companions, a party of hunters, at that time encamped on the Arkansa.¹²⁷

¹²⁷ At this point it becomes difficult to follow exactly the movements of the party, as the nomenclature of the region has in the interim changed almost entirely. Moreover, the itinerary is carelessly recorded and the map of the expedition is inaccurate. The journey of twenty-seven miles on July 1, reckoned from the camp of June 30, near the Bijeau, as shown on the map, brought the party nearly to the Cache la Poudre River, which flows from the northwest, reaching the South Platte below the bend where its course turns eastward. Cache la Poudre is shown but not named on the map, which, apparently erring, places the camp of July 1 and 2 above its mouth; for it is evidently the first of the large creeks passed on the third. At the bend is Thompson Creek, also unnamed on Long's map; and just above is St. Vrain Creek. Both of these flow from the west and the latter evidently corresponds to Potera's Creek of the text.

Throughout the day we were approaching the mountains obliquely, and from our encampment at evening, we supposed them to be about twenty miles distant. Clouds were hanging about all the higher parts of the mountains, which were sometimes observed to collect together, and descend in showers, circumscribed to a limited district. This state of the weather obstructed the clearness, but added greatly to the imposing grandeur of some of the views which the mountain presented.

4th. We had hoped to celebrate our great national festival on the Rocky Mountains; but the day had arrived, and they were still at a distance. Being extremely impatient of any unnecessary delay, which [181] prevented us from entering upon the examination of the mountains, we did not devote the day to rest, as had been our intention. We did not, however, forget to celebrate the anniversary of our national independence, according to our circumstances. An extra pint of maize was issued to each mess, and a small portion of whiskey distributed.

On leaving the camp in the morning, Major Long and Lieutenant Swift preceded the party, intending to select a suitable place for encampment, where they proposed to commence a set of observations, and to wait the arrival of the remainder of the party. But as they had gone forward about two miles, the point of woods at which they had left the course was mistaken by the main body, which moved on until about eleven o'clock. By this time much anxiety was felt on account of their absence, and persons were sent out to attempt to discover them, but returned un-

The bend in the river, passed July 3, is the point of nearest approach to Long's Peak, still forty miles distant. Near the camp of that evening, at the mouth of St. Vrain's Creek, the important fur-trading firm of Bent and St. Vrain built St. Vrain's Fort about twenty years later. In favorable weather, Pike's Peak is visible from this point.— Ed.

successful. A circumstance tending to increase the anxiety which was felt, was, that Indians were reported to have been seen in the course of the morning by several of the party. Captain Bell was about to despatch as large a force as it was thought prudent to spare from the camp, to search for them in all the distance which had been passed since they were seen, when they arrived at the encampment of the main body, at half past one P. M.

The observations which had been made were, of course, lost, as the corresponding equal altitudes for the correction of time could not be had.

In the evening, the meridional altitude of Antares was taken for latitude.

Several valuable plants were here collected, and, among others, a large suffruticose species of lupine. The long-leaved cotton-wood¹²⁸ of Lewis and Clarke, which is, according to their suggestion, a species of populus, is here of very common occurrence. It is [182] found intermixed with the common cotton-wood, resembling it in size and general aspect. Its leaves are long and narrow; its trunk smoother, and its branches more slender and flexible than those of the *populus angulata*. Some of its fruit was fortunately still remaining, affording us an opportunity to be entirely satisfied of its relation to this genus.

Here we also observed both species of the splendid and interesting *Bartonia*, and *B. nuda* in full flower, the *ornata* not yet expanded.

These most singular plants are interesting on several accounts, particularly the regular expansion of their large and beautiful flowers towards the evening of several successive days. In the morning the long and slender petals, and the petal-like nectaries, which compose the flower,

¹²⁸ *Populus angustifolia*, J.— JAMES.

are found accurately closed upon each other, forming a cone of about an inch in length. In this situation they remain, if the weather be clear, until about sunset, when they gradually expand. If the weather be dark and cloudy, with a humid atmosphere, they are awakened from their slumbers at an earlier hour. We have, in some instances, seen them fully expanded early in the afternoon; but this has always been in stormy or cloudy weather. In this particular the *Bartonia* bears some resemblance to the great night-flowering cereus, to which it is closely allied; but the gaudy petals of the cereus, once unfolded, fall into a state of irretrievable collapse, whereas, the *Bartonia* closes and expands its flowers for many days in succession.¹²⁹

A number of young magpies were seen in the bushes about the river; also the nests and young of the mocking-bird, (*turdus orpheus*, Vieil.)

The prairie-dog villages we had observed to become more frequent and more extensive as we approached the mountains; and we had now constant opportunities of contrasting the stupendous elevations of the Andes with the humble mounds cast up by this interesting little animal. We observed in the [183] numerous burrows an appearance of greater antiquity than in those more remote from the mountains. Many of the mounds occupy an extent of several yards in diameter, though of but inconsiderable

¹²⁹ Other plants were collected about this encampment, among which we distinguished an interesting species of *ranunculus*, having a flower somewhat larger than that of *R. fluviatilis* with which it grows, often extending, however, to some distance about the margins of the pools in which it is principally found. *R. amphibius*; slender, floating or decumbent, leaves reniform, four or five lobed, divisions cuneate, oblong, margin crenate, petioles long and alternate. The submersed leaves are, in every respect, similar to the floating ones. *Pentstemon orianthera*, N., *Poa quinquefida*, *Potentilla anserina*, *Scrophularia lanceolata*, *Myosotis glomerata*, N. ? &c. were also seen here.— JAMES.

elevation, and with the exception of the present entrance, overgrown with a scanty herbage, which always marks the area of the prairie-dog villages. Indeed we have observed several large villages, with scarce a trace of vegetation about them. The food of the marmot consisting of grasses and herbaceous plants, it is not perhaps easy to assign a reason for the preference which, in selecting the site of his habitation, he always shows for the most barren places, unless it be that he may enjoy an unobstructed view of the surrounding country, in order to be seasonably warned of the approach of wolves, or other enemies.

Rattle-snakes of a particular species¹²⁰ are sometimes seen in these villages. They are found between the Mississippi and the Rocky Mountains, and appear to prefer an unproductive soil, where their sluggish gait may not be retarded by the opposing obstacles of grass and weeds.

¹²⁰ *Crotalus tergeminus*, S.— *Body* dusky cinereous, a triple series of deep brown spots; beneath with a double series of black spots.

Body pale cinereous brown, a triple series of fuscous spots, dorsal series consisting of about forty-two large, transversely oblong-oval spots, each widely emarginate before, and obsoletely edged with whitish lateral series, spots transversely oval, opposite to those of back; between the dorsal and lateral series is a series of obsolete, fuliginous spots, alternating those of the two other series; *head* above with nine plates on the anterior part, on which are a band and about three spots, two undulated vittæ terminating and confluent with the first spot of the neck, a black vittæ passes through the eye, and terminates on the neck each side; *beneath* white, a double irregular series of black spots, more confused towards the tail; *tail* above, with five or six fuscous fasciæ, beneath white irrorate with black points, six terminal plates bifid.

Length	2 ft. 2½ in.
tail	2½ in.
Plates of body -	151
of tail	19
Bifid plates at tip	6

Another specimen, much smaller, Pl. 152. subcaudal, 20. scales at tip 3.—
JAMES.

Whilst exploring Bowyer creek of the Missouri, in the spring of 1820, our party met with six or eight of them during one day's march on the prairie; and on our subsequent journey to the Rocky Mountains, we several times encountered equal, or even greater numbers, in the same space of time. This is the species of serpent which travellers have observed to frequent the villages of the prairie dogs, and to which they have attributed the unnatural habit of voluntary domiciliation with that interesting animal. It is true that the *tergeminus*, like many other serpents, will secure a refuge from danger in any hole of the earth, rock, or fallen tree that may present itself, regardless of the rightful occupant; but we witnessed no facts which could be received as a proof that it was an acceptable inmate of the dwelling of the *arctomys*.

[184] From the disparity in the number of plates and scales, and from the greater size of the vertebral spots in this species than in the *C. miliaris*, we have been induced to consider this as a distinct species. Specimens are in the Philadelphia museum.

On the 5th of July we left our camp at an early hour, and ascended the Platte about ten miles. Here the party encamped for the day;¹²¹ and Mr. Peale and Dr. James, with two riflemen, went out for an excursion on foot, intending to ascend the Cannon-ball creek to the mountains, which appeared to be about five miles distant.

This creek is rapid and clear, flowing over a bed paved with rounded masses of granite and gneiss. It is from a

¹²¹ The journey of July 4, and the ten miles travelled on the fifth, would carry the party thirty-five or forty miles up the river from the mouth of St. Vrain's Creek; this would, for their camp of the fifth, bring them near the site of Denver. Vermillion Creek, which was crossed early on the sixth, is evidently Cherry Creek, which flows through the present city.— ED.

supposed resemblance of these masses to cannon balls that the creek has received its name from the French hunters. The channel is sunk from fifty to one hundred feet below the common level of the plain.

This plain consists of a bed of coarse pebbles, gravel, and sand; and its surface is thinly covered with prickly pears, and a scanty growth of starved and rigid grasses. Among these the hygrometric stipa, (*s. juncea*, *s. barbata*,) is extremely troublesome, its barbed and pointed seeds adhering and penetrating, like the quills of the porcupine, into every part of the dress with which they come in contact. The long and rigid awn is contorted or straight, in proportion to the humidity or dryness of the atmosphere; indicating the changes in this respect with the precision of the nicest hygrometer.

The detached party extended their walk about eight miles without finding that they had very considerably diminished the apparent distance to the base of the mountain. They had unluckily forgotten to make any provision for dinner, and now found themselves fatigued and hungry at the distance of eight miles from the encampment of the main body and so far from the mountains, that it was evidently [185] impossible they should reach them and return on the same day. It was therefore determined to relinquish the attempt, and Mr. Peale was fortunate enough to kill a couple of curlews, which were roasted and eaten without loss of time.

Near the place of this halt they observed some small sandstone ridges similar to those on the Platte below, and collected, among other plants, the species of currant (*ribes aureum*?) so often mentioned by Lewis and Clarke, the fruit of which formed an important article of the sub-

sistence of their party while crossing the Rocky Mountains.¹²³

They also saw about the shelvings of the sandstone rocks, which formed for some distance the banks of the stream, innumerable nests of the cliff swallows, similar to those seen on the Missouri. In returning to the camp by a different route, they were much annoyed by the prickly pears, covering the ground so closely, that their feet were frequently wounded by the thorns, against which their mockasins presented but a very inadequate protection.

Having killed a young antelope, they recrossed the Platte, which was here about three feet deep, and clear, and rapid, and arrived at camp at sun-set.

Here a complete set of observations, for latitude, longitude, &c., had been taken. Major Long and Lieutenant Swift having preceded the party in the morning, and arrived before seven o'clock for that purpose. In the evening, observations were attempted, but without success, as the sky soon became cloudy.

Robins, which we had not seen since we left the Missouri, here occurred in considerable numbers.

On the following morning, soon after leaving the encampment, we crossed Vermilion creek, a considerable tributary from the south. Its upper branches interlock with those of a tributary of the Arkansa. In some part of its course, its valley is bounded by [186] precipitous cliffs of a red sand-rock, whence the name of the creek.

¹²³ The ripened fruit of this widely-distributed shrub is variable in colour. In dry and exposed situations about the higher parts of the mountains, we have met with the berries of a deep purple, while in the low grounds, they are fulvous or nearly white. On the Cannon-ball creek we saw also the common virgin's bower. *Clematis virginica*, Ph. *Lycopus europæus*, *Liatris graminifolia*, *Sium latifolium*, *Oenothera biennis*, and other plants, common in the east, with the more rare *Linum Lewisii*, Ph. and *Eriogonum sericeum*, &c.—JAMES.

Our guide informed us that the Indians, a few years since, destroyed every individual of a large herd of bisons, by driving them over the brink of one of these precipices.

Opposite the mouth of Vermilion creek is a much larger stream, from the north-west, which is called medicine-lodge creek,¹³³ from an old Indian medicine lodge, which formerly stood near its mouth. A few miles further, on the same side, is Grand Camp creek, heading also in the mountains. About four years previous to the time of our visit, there had been a large encampment of Indians and hunters on this creek. On that occasion, three nations of Indians, namely, the Kiawas, Arrapahoes, and Kas-kaias or Bad-hearts, had been assembled together, with forty-five French hunters in the employ of Mr. Choteau and Mr. Demun of St. Louis.¹³⁴ They had assembled for the purpose of holding a trading council with a band of Shiennes. These last had been recently supplied with goods by the British traders on the Missouri, and had come to exchange them with the former for horses. The Kiawas, Arrapahoes, &c. who wander in the fertile plains of the Arkansa and Red river, have always great numbers of horses, which they rear with much less difficulty than the Shiennes, whose country is cold and barren.

The British traders annually supply the Minnetarees

¹³³ Medicine Lodge Creek, Cannon Ball Creek, mentioned above, and Grand Camp and Grape creeks, referred to a few lines below, cannot be certainly identified. Streams most nearly answering the descriptions given are now called Clear, Bear, and Deer creeks.—ED.

¹³⁴ A. P. Chouteau and Julius De Munn formed a partnership in 1815, for trading on the upper Platte and Arkansas. De Munn soon after went to Santa Fé, where he sought permission to trap within Spanish territory; but the negotiations, which at first promised to be successful, took an unfavorable turn, with the result that both partners were arrested in 1817, and after a short confinement deprived of their goods and ejected from the Spanish dominions. The Santa Fé route was not fully open to trade until after the downfall of Spanish power in 1821.—ED.



View of the Chasm through which the Platte issues from the Rocky Mountains

or Gros-ventres of the Missouri with goods; from these they pass to the Shiennes and Crow Indians, who, in their turn, barter them with remoter tribes: in this manner the Indians who wander near the mountains receive their supplies of goods, and they give a decided and well founded preference to those which reach them by this circuitous channel, to those which they receive from any other source.

Two miles beyond Grand Camp creek, is the mouth of Grape creek, and a little above, on the [187] opposite side, that of Defile creek,¹⁸⁶ a tributary to the Platte, from the south, which has its course in a narrow defile, lying along the base of the mountains.

At eleven o'clock we arrived at the boundary of that vast plain, across which we had held our weary march for a distance of near one thousand miles, and encamped at the base of the mountain. The woodless plain is terminated by a range of naked and almost perpendicular rocks, visible at a distance of several miles, and resembling a vast wall, parallel to the base of the mountain. These rocks are sandstone similar in composition and character to that on the Cannon-ball creek. They emerge at a great angle of inclination from beneath the alluvial of the plain, and rise abruptly to an elevation of one hundred and fifty or two hundred feet. Passing within this first range, we found a narrow valley separating it from a second ridge of sandstone, of nearly equal elevation, and apparently resting against the base of a high primitive hill beyond. At the foot of the first range, the party encamped at noon, and were soon scattered in various directions, being eager to commence the examination of that interesting region.

Our camp was immediately in front of the chasm,

¹⁸⁶ Defile Creek is the modern Plum Creek, which flows north through Douglas County.— Ed.

through which the Platte issues from the mountains. A little to the south is a commanding eminence, from which the view of the chasm was taken.¹²⁶

[188] CHAPTER IX [VII]

Sandstone Formation at the Base of the Rocky Mountains
— The Platte within the Mountains — Granitic Mountains Between the Platte and Arkansa — Castle Rock
— Birds — Plants.

THE district occupied by the inclined sandstone, at the base of the mountains, we found much wider, and the rocky summits incomparably more elevated, than from a remote view we had supposed.

July 6. This extensive range, rising abruptly from the plain, skirts the base of the mountains like an immense rampart, and to a spectator placed near it, intercepts the view of the still more grand and imposing features of the granitic ridge beyond. It is made up of rocks composed of the broken down and comminuted fragments of pre-existing aggregates embosoming reliquæ of the animals of a former world, known to us only by the monuments which these remains exhibit. Though rugged and precipitous, its elevation is small, when compared to that of the stupendous Andes, which rise above it far into the regions of perpetual winter. The stratifications with which it is distinctly seamed, penetrate the mass with various degrees of obliquity, sometimes running perpendicularly to the horizon; seeming unequivocally to prove, that the whole has receded from its original position, and that these immense rocky masses have, by the operation of some powerful agent, been broken off from their original continuity

¹²⁶ See p. 283.—ED.

with the strata now found in a horizontal position in the plains.

It is difficult, when contemplating the present appearance and situation of these rocks, to prevent the [189] imagination from wandering back to that remote period, when the billows of an ocean lashed the base of the Andes, depositing, during a succession of ages, that vast accumulation of rounded fragments of rocks, alternating with beds of animal remains, which now extends without interruption from the base of this range to the summits of the Alleghany mountains; and endeavouring to form some idea of that great subsequent catastrophe, by which this secondary formation has so changed its elevation, in relation to the primitive, that its margin has been broken off and thrown into an inclined or vertical position.

The valley which intervenes between this huge parapet of sand-rock and the first range of the primitive is nearly a mile in width; it is ornamented with numerous insulated columnar rocks, sometimes of a snowy whiteness, standing like pyramids and obelisks, interspersed among mounds and hillocks, which seem to have resulted from the disintegration of similar masses. This range of sandstone would appear to have been originally of uniform elevation and uninterrupted continuity, running along the base of the mountains from north to south; but it has been cut through by the bed of the Platte, and all the larger streams in their descent to the plains.

From our camp, we had expected to be able to ascend the most distant summits then in sight, and return the same evening; but night overtook us, and we found ourselves scarcely arrived at the base of the mountain.¹⁸⁷

¹⁸⁷ The deceptiveness of Colorado distances, owing to the rarefied atmosphere, is one of the commonest observations of tourists. Pike, in 1806, thought

The lower part of the sandstone stratum, being exposed at the western declivities of the hills, and in the parts nearest the granite, contains extensive beds of coarse conglomeratic, or pudding-stone, often of a reddish colour. The more compact parts of the rock contain the remains of terebratulæ, and other submarine animals. Among these, few are entire or in good preservation. We observed here several singular scorpion-like, spider-formed [190] animals, inhabiting under stones and dried bisons' dung. They have a formidable appearance, and run actively. They belong to the class arachnoides, genus galeodes, which has been heretofore observed only in warm climates; not one was known to inhabit this continent.¹²⁸

About the sandstone ledges we collected a geranium¹²⁹ intermediate between the crane's-bill and herb-robert,

it would be possible to ascend the peak which now bears his name, and return to camp in the course of one day. From Colorado Springs it is apparently only a short walk to the summit; but the air-line distance is twelve miles, and that which must actually be travelled is two and a half times as great.—ED.

¹²⁸ Genus *Galeodes*, OLIV.—1. *G. pallipes*, SAY.—Hairy, mandibles horizontal, fingers regularly arquated, abdomen sub-depressed livid.

Body pale yellowish-brown, hairy; *feet* paler, whitish, first pair smallest, fourth pair largest and longest; *abdomen* livid, hairy, sub-depressed; *palpi* more robust than the three anterior pairs of feet, of subequal diameter, but rather thicker towards the tip; more hairy than the feet; *eyes* and *tubercle* blackish; *mandibles* dilated, with numerous rigid setæ, and with parallel setæ projected over the fingers; *fingers* regularly arquated, reddish-brown at tip, and with a reddish-brown line above and beneath, within armed with many robust teeth; *thorax* with a deep sinus at the anterior angles.

2. *G. subulata*, SAY.—Hairy; *mandibles* horizontal; *thumb* nearly rectilinear, destitute of teeth. This species has the strongest resemblance to the preceding, both in form, magnitude, and colouring; but the superior finger of the mandibles is unarmed, and rectilinear or very slightly flexuous; the inferior finger is arquated, with about two robust teeth.—JAMES.

¹²⁹ *G. intermedium*, L.—Cespitose, sub-erect, pubescent, sparingly branched above. Radical leaves reniform deeply 4 cleft. The flower is a little larger than that of *G. robertianum*, and similarly coloured, having whitish lines towards the base of the corolla. We also saw here the *Campanula decipiens*, TENS. *Lysimachia ciliata*, PH. *Troximon glaucum*, N., with two or three belonging to Geneva, with which we were unacquainted.—JAMES.

the beautiful calochortus (*C. elegans*, Ph.) and a few other valuable plants.

The Platte, at the foot of the mountains, is twenty-five yards wide, having an average depth of about three feet, its water clear and cool, and its current rapid. Its descent for twenty miles below cannot be less than ten feet per mile. Its valley is narrow and serpentine, bounded by steep and elevated hills, embosoming innumerable little lawns, often of a semicircular form, ornamented by the narrow margin of shrubbery along the Platte.

The narrow valley between the ridges of sandstone is a little more fertile than the plains along the river. It is covered with fine and short grasses, and is varied with here and there a copse of small oaks or hazels. There are also some columnar masses of white sandstone, twenty or thirty feet high, standing remote from each other, having the *débris* around their bases covered with shrubby oaks. As we were passing near one of these, an uncommonly large and beautiful buck deer sprung out from the bushes, and stood gazing on us, until he received in his side the ball, which brought him instantly to the earth.

We observed here the obscure wren,¹⁴⁰ a bird more closely related to the great Carolina wren of Wilson than

¹⁴⁰ Genus *Troglodytes*. Cuv.—*T. obsoleta*, SAY.—Above dusky-brownish, slightly undulated with pale, tinted with dull ferruginous on the top of the head, and superior portion of the back; *sides of the head* dull whitish, with a broad brown line passing through the eye to the origin of the neck; *primaries* plain, being entirely destitute of undulations or spots; *tail coverts* pale, each with four or five fuscous bands; *chin, neck beneath, and breast* whitish, each feather marked by a longitudinal line of light brown; *belly* white; *flanks* a little tinged with ferruginous; *inferior tail coverts* white, each feather bifasciate with black-brown; *tail* simple, broadly tipped with ferruginous-yellow, and with black before the tip, the remaining portion colour of wings, and obsoletely banded; these bands are more distinct on the two middle feathers, which are destitute of the black and yellowish termination; exterior plume marked by four yellowish white spots on the exterior web, and by two larger ones on the inner web; the tip is dusky, length six inches; bill, from the corner of the mouth, rather more than one inch.

— JAMES.

any other we have seen; but the characters drawn from the primaries, and from the marking of the tail, sufficiently distinguish it from that species. The bill is somewhat longer, and the general tint of the plumage of a much more sombre hue. It frequents the arid country in this vicinity, [191] and is often seen hopping about upon the branches, and singular compressed semi-procumbent trunks of the *juniperus depressa*. The bill of this species approaches the form which characterizes the genus *certhia*, in which Wilson has placed its kindred species, the Carolina wren.

On the morning of the 7th of July, the party remaining in the encampment of the preceding day, Dr. James and Mr. Peale, accompanied by two riflemen, were sent out to examine the mountains. These appeared most accessible on the north side of the river, opposite our encampment. The river was here about four feet deep, and the strength of the current such as to render it impossible for a man to keep his feet in the deepest part of the stream. As some of the party destined for the mountains could not swim, it was thought hazardous for them to attempt to cross the river by fording. To obviate this difficulty, two men were sent with a long rope, which they were directed to stretch across the river, making the ends fast on either shore. This was readily accomplished, one of the men swimming across with an end of the rope in his teeth. By the aid of this, the detachment were enabled to keep their feet in crossing, though with extreme difficulty, as the bed of the river was uneven and rocky. They all, however, arrived in safety on the left-hand bank by about sunrise.

After passing the region of inclined sandstone, which is about two miles in width, they began to rise upon what may be considered the base of the mountain. As the day advanced, the heat became oppressive, and they found

themselves somewhat exhausted before they had crossed the sandstone hills, which appeared so inconsiderable from our encampment, that the labour of crossing them had been almost forgotten in estimating the toils of the day. The first range of primitive rocks they found far more abrupt and rugged than what they had already passed. Its sides are destitute of vegetation, except a few prickly [192] pears and yuccas, with here and there a stunted oak or juniper, and so steep that great exertion as well as the utmost caution, are necessary in ascending.

The rock is an aggregate of felspar and hornblende, approaching in character some of the common varieties of sienite. On the eastern side, where the felspar is in the greatest proportion, it is flesh-coloured, and its structure crystalline; the fractured surface of the mass being uneven like that of coarse granite. Advancing towards the west, hornblende was found to become more and more predominant, and so arranged as to have in the mass a laminated appearance. The natural fissures or cleavages between the lamina run nearly in a perpendicular direction, giving the rock the columnar structure of trap or greenstone.

As the detachment proceeded, a few interesting insects and plants occurred to reward their labours. But these impenetrable and naked rocks, are the abodes of few living beings, either animal or vegetable. In the crevices of the rocks where a scanty soil has accumulated, is here and there planted a hardy evergreen, whose short and gnarled trunk, recurved and inflexible branches, proclaim the storms it has withstood, and the centuries during which it has vegetated.

The design of the party had been to cross the first range of the mountains and gain the valley of the Platte beyond, but this they found themselves unable to accomplish.

After climbing successively to the summit of several ridges which they had supposed to be the top of the mountain, they still found others beyond higher and more rugged. They therefore relinquished the intention of crossing, and began to look for the best way to descend to the bed of the river, which lay on their left hand. Here they halted to rest for a few moments, and exposed a thermometer in the shade of a large rock. The mercury fell to 72°; in camp, at the same hour it stood at [193] 86°. They were so much elevated above the river, that although they could see it plainly, it appeared like a small brook of two or three yards in width, and though white with foam and spray, caused by the impetuosity of its current, and the roughness of its channel, its "idle chiding could not be heard so high." They could distinguish two principal branches of the Platte — one coming from the north-west, the other from the south; a little below the confluence of these branches, the river turns abruptly to the S. E., bursting through a chasm in a vast mural precipice of naked columnar rocks.¹⁴¹

About noon the detachment commenced their descent, which cost them no less exertion than their ascent in the morning. Their fatigue was aggravated by thirst, as they met with no water, nor any shade excepting that of projecting rocks in the higher parts of the mountain.

They chose a different route from that which they had taken in ascending, intending to descend to the river, with

¹⁴¹ The North Fork of the South Platte encloses South Park on the north, flowing from west to east; while the other branch, which retains the name South Platte, encircles South Park on the south and east. The Denver, Leadville, and Gunnison Railroad now enters the mountain district through Platte Cañon. It is probable that Pike entered South Park in 1806 (see volume xvi, note 14); but Long's failure to penetrate the mountains at this point left the famous park unknown, save to wandering hunters, until Frémont's time, more than twenty years later.— ED.

the hope of being able to travel along its bed. They were obliged to assist each other in lowering themselves down precipices; they would have found it impossible to pass singly. On the southern declivity of the mountain, they met with a few ripe currants, but these were hard and juiceless, of a sweetish taste, and aggravated, instead of alleviating their thirst, and were probably the cause of a violent head-ache, with which several of the party were affected soon after eating them. There were also found a few large and delicious raspberries, of a species approaching the flowering raspberry (*rubus odoratus*), but with smaller leaves, and a more branching stem.

After descending from the more precipitous parts about the summit of the mountain, they crossed along a rugged tract, buried and rendered almost impassable by boulders and fragments which had fallen from above, and were at length so fortunate as to [194] find a spring of cool water, and a shade, in a narrow ravine; where they sat down to rest and dine on the provision they had brought.

The men who were with them stopped in the same ravine, a few rods below. One of these was violently attacked, immediately after drinking of the water, with headache, vomiting, and purging, which increased to such an alarming degree, that he was presently unable to stand upon his feet. As it was feared he would not soon be able to walk, Mr. Peale undertook to return alone to camp, and give notice of his situation, and return with medicine and assistance.

He descended along a rough and obstructed ravine, until he arrived at the Platte, but found the valley so confined as to be impassable, and again directed his course towards the north-east, attempting to regain the route which the party had taken in ascending. After a most

rough and fatiguing march of about six miles, he arrived at camp late in the afternoon. Here he found a number of the party suffering in a similar manner, but not so severely as the man he had left in the mountains. Two men were immediately despatched in search of the disabled party.

Mr. Peale had left them but a short time, when their attention was called to the noise as of some large animal running up the narrow defile in which they were sitting; on turning round they perceived a large bear advancing at full speed towards the place where they were. Seizing their rifles, they fired upon him at the distance of about ten steps, but the bear, without stopping or turning his head, mounted an almost perpendicular precipice of about thirty feet, and was out of sight in an instant.

At this spot, which was several miles within the mountains, and elevated nearly to the limit of phænogamous vegetation, the common hop (*H. lupulus*) was growing in perfection; also the box elder (*Acer negundo*, Ph.), the common sarsaparilla of the eastern [195] States (*Aralia nudicaulis*), the spikenard (*A. vacemora*), and many other common plants.

After waiting about two hours, they found the sick man so far recovered as to be able to stand upon his feet and walk a little. They therefore relieved him of his gun and other luggage, and moved by short stages towards camp, where they arrived at a late hour in the evening.¹⁴³

¹⁴³ Among many plants collected in this excursion, some of them new to us, we recognized an old acquaintance in the bearberry (*Arbutus uva-ursi*, L.) an inhabitant of the mountainous districts of New York and New England; also the Dodecatheon *integrifolium*, Ph.; and a beautiful little plant referable to the genus *Mentzelia* of Plumier. On the higher parts of the mountain an oak is common, approaching in character to the *Quercus banisteri*, Mx. Also a small undescribed acer, the *Juniperus communis* and *J. virginiana*; in the ravines,

The men who had been sent out to their assistance returned some time afterwards, having sought for them without success.

On the morning,¹⁴⁸ soon after the departure of Dr. James's detachment, two of the party passed into the mountains on the left side of the river; they experienced much difficulty, and underwent much labour in scaling the steep ascents, and some hazard in descending the precipitous declivities which marked their course. The timber was small, scrubby, and scattered in the most favoured situation; and many of the solitary pines which occupied an elevated position, had evidently been the sport of furious tempests, being rived and seamed by lightning. Upon surmounting one of the elevations, they observed on a projecting ledge of the succeeding mountain two elk grazing, which seemed to be at a very short distance; and in consequence of this deceptive appearance were magnified into a vast size. The party were surprized at the apparent heedlessness of these animals, which remained peacefully feeding, whilst the party was clambering along the rocks in full view, until at length they majestically bounded off, leaving the authors of their alarm to measure the unexpected distance to the position they had occupied. To the right, and easy of access, was a projecting rock supporting a single humble cedar in one of its fissures, from which a stone let fall was received into the torrent of the river which washed its base. The huge rampart of naked rock which had been seen from below to stretch across [196] the valley, was now in nearer view, the river whirling

the *Rhus toxicodendron*, *Spiræa opulifolia*, etc; and at the base of the mountains the *Prenanthes runcinata*, leaves *runcinate pinnatifid*, $\frac{3}{4}$ inches long, five lines wide. Resembles *P. Juncea*, *Saxifraga nivalis*, *L. A. cerastium*, etc.—JAMES.

¹⁴⁸ The words "of the same day" should here be inserted; so reads the Philadelphia edition.—ED.

abruptly around the acute angle of its extremity, and offering at its superior edge an embattled outline. They ascended a primitive mountain, which seemed to be of a superior elevation, in order to overlook the western ranges; but found their horizon bounded by the succeeding mountains towering majestically above them. To the east, over the tops of a few inferior elevations, lay expanded the vast interminable prairie over which we had so long held our mountainous march. The undulations which swell its surface now disappeared, and the whole lay like a map before the observer. They could trace the course of the Platte, and number the streams they had crossed, and others which they had before passed near, by the slight fringing of timber or bushes which margined their banks, and by an occasional glimpse of their streams shining like quicksilver, and interrupting and varying the continuity of the plain as they pursued their serpentine course. The atmosphere was remarkably serene, small clouds were coursing over the surface of the heavens, casting their swiftly moving shadows upon the earth, and enhancing the beauty of the contrast which the long lines of timber afforded to the general glare of light. After contemplating for some time the beauty and extent of the scene, their attention was attracted by a moving point, which occasionally became visible by reflecting the rays of the retiring sun. This object was our white flag, waving in a gentle breeze, and revealing the position of our camp, the only spot in the boundless landscape where the eye could rest on the work of human hands. The descent towards the river from this pinnacle was so precipitous, that much caution was requisite in attempting to gain the river towards which they now directed their course. Upon a step or resting place were several ponderous masses of

rock, which, by the application of a little force, were readily overturned down the steep; and [197] we were amused by marking their impetuous and rapidly increasing motion as they rolled and bounded onward, until a surge and wide-thrown spray announced their reception into the bed of the river. Arriving at the river, it was found necessary to pass along in the stream, the margin not admitting sufficient foot-hold; this mode of progression, however, soon proved too painful and laborious, as the very unequal rocks with which the bottom was paved, were invested with a slime, and refused repose to the foot, the uncertain motion of which was only arrested by the opposition of an angular fragment, or the intervention of an interstice; we therefore again ascended the mountain side, and at length regained the plain.

Astronomical observations were attempted at camp, but in the middle of the day the moon was found to be too near the sun, and in the evening the sky was cloudy.

The sickness experienced by almost all the party was probably occasioned by eating of currants, which were abundant about the camp. It is not to be supposed this illness was caused by any very active deleterious quality in the fruit, but that the stomach, by long disuse, had in a great measure lost the power of digesting vegetable matter. Several continued unwell during the night.

On the morning of the 9th [8th] of July¹⁴ we resumed our

¹⁴ A series of erroneous dates begins here. The expedition undoubtedly left Platte Cañon July 8, of which day the text gives no account. July 9 was Sunday, instead of July 10, as the text states below. A compensating error is introduced by giving the date July 12 to accounts of the journeys of parts of two days. The Philadelphia edition also has the erroneous dating of the ninth, tenth, and eleventh, but includes the remainder of the chapter under the last date, thus failing entirely to account for the twelfth, and really including the operations of three days (tenth, eleventh, and twelfth) under date of July 11. The itinerary for these days is more accurately indicated on the map.— Ed.

journey, travelling somewhat east of south along a small tributary of the Platte. The bed of this stream lies from south to north along a narrow valley, bounded on each side by high cliffs of sandstone. The rock is similar to that already mentioned, its strata having, however, less inclination than is observed nearer the base of the mountain. It is the margin of that great formation of secondary which occupies the plain, and appears as if broken off and thrown into an inclined position by some convulsion which changed the relative elevation of [198] the stratum. It is of great thickness, its laminæ in an almost vertical position, covering a surface of two or three, and sometimes many miles in width. On the eastern declivities of the first ranges of hills in places which may be supposed to have occupied the surface of the stratum in its original position, the rock is usually of a close grain and compact texture, and of a yellowish white or light gray colour.

We observed, in various parts of the valley which traverse this sandstone district, several detached columnar masses, many of them bearing a striking resemblance to colossal ruins; also some insulated hills with perpendicular sides and level summits. These seem to be the remains of an extensive portion of the sandstone stratum which formerly covered the country to the level of their highest summits. They occur at considerable distance from the base of the primitive mountain, and their summits are occupied by horizontal strata of sandstone; for a small portion of the upper part of their elevation their sides are nearly perpendicular, but their bases are surrounded by an extensive accumulation of *débris* sometimes rising nearly to the summit. After ascending the small stream before mentioned to its source, we crossed

an inconsiderable ridge which separates it from the valley of Defile Creek. This we ascended to the place where its principal branch descends from the mountains. Here we encamped with the intention of resting on the following day, which was Sunday.¹⁴⁸

July 10th [9th]. A beautiful species of pigeon was shot near the mountain. The head is of a purplish cinereous colour; the back of the neck, and its sides, brilliant golden-green; the feathers at base brownish purple; above this patch, and at base of head, is a white semi-band; the under part of the neck is pale vinaceous purplish; this colour becomes paler as it approaches the vent, which, with the inferior tail coverts, is white; anterior portion of the back, the [199] wing coverts and scapulars are brownish ash; the larger wing feathers dark brown, approaching black; the exterior edges whitish; the lower part of the back, the rump and tail coverts, inferior wing coverts and sides, bluish ash; paler beneath the wings; the shafts of the body-feathers and tail coverts are remarkably robust, tapering rather suddenly near the tips; the tail is medial, rounded at tip, consisting of twelve feathers, a definite black band at two-thirds their length from the base, before which the colour is bluish ash, and behind it dirty whitish; the bill is yellow, tipped with black, and somewhat gibbous behind the nostrils; the irides red; the feet yellow; claws black.

This species seems to be most intimately connected to the ring-tailed pigeon (*C. caribæa*), from which it differs in the colour of the legs and bill, and in not having the gibbosity at the base of the latter so remarkable. It is possible that it may be an intermediate link between the

¹⁴⁸ The camp of July 8 and 9 was probably near the site of Sedalia, at the confluence of the east and west forks of Plum (here called Defile) Creek.—ED.

ring-tailed pigeon and the stock pigeon of Europe, with the latter of which it has, in common, the exterior white edging to the greater wing feathers. It may be distinguished by the name of band-tailed pigeon (*Columba fasciata*, Say); and may be seen, with other specimens of natural objects collected on this expedition, in the Philadelphia Museum.

Several of the tributaries to Defile creek appear to discharge as much water as is seen in the stream below their junction. This appearance is common to many of the larger creeks, their broad and sandy beds allowing much of the water to sink, and pass off through the sand. In the evening, a favourable opportunity, the first for several days, presented, and observations for latitude were taken.

That part of Defile creek, near which we encamped, is filled with dams, thrown across by the beaver, causing it to appear rather like a succession of ponds than a continued stream. As we ascended [200] farther towards the mountains, we found the works of these animals still more frequent. The small willows and cotton-wood trees, which are here in considerable numbers, afford them their most favourite food.

At no great distance to the east of our camp was one of these peculiar hills above mentioned. In visiting it we crossed a ridge of sandstone, about three hundred feet in height, with strata inclined to the west. To this succeeds a valley, about one mile wide, having a scanty growth of pine and oak. The ascent of the hill is steep and rugged. Horizontal strata of sandstone and coarse conglomerate are exposed on its sides, and the summit is capped by thin stratum of compact sandstone, surmounted by a bed of greenstone trap, or trappea porphyry. The loose and splintery fragments of this rock sometimes

cover the surface, making a clinking noise under the feet, like fragments of pottery.

The summit of this hill is of an oval form, about eight hundred yards in length and five hundred in breadth. Its surface is undulating, and is terminated on all sides by perpendicular precipices. The elevation of the hill is about one thousand feet, and the height of the perpendicular precipices, from the summit of the *débris* to the top of hill, about fifty.

From the top of this hill, the high peak mentioned by Captain Pike, was discovered, and its bearing found to be S. 50. W.

Several of the party ascended Defile creek until they arrived at the mountains, into which they penetrated as far as was found practicable. As they travelled along the bed of this, they found the several rock formations beautifully exposed, and in the following order.

Commencing from the alluvial of the plain on the east, they saw:

First, Horizontal sandstone, embracing extensive [201] beds of coarse conglomeratic, and commonly of a light gray or reddish yellow colour.

Second, Fine compact gray sandstone, containing a few impressions of organized remains, resembling those in the sandstones of coal formations. This rock is inclined at an angle of near twenty degrees towards the west. It forms continuous ranges of hills, not difficult of ascent from the east, but their western declivities are abrupt and precipitous.

Third, Lofty and detached columns of sandstone, of a reddish or deep brown colour. These are irregularly scattered throughout a narrow untimbered valley. Some of them rise probably three hundred feet above the common

level of the plain, and are so steep on all sides as to preclude the possibility of ascent. Others are accessible at some points, and one of these we ascended. Sketches of these singular rocks have been preserved both by Mr. Peale and Mr. Seymour.

Fourth, Coarse white pudding-stone or conglomeratic and sandstone, of a deep red colour, alternating with each other, and with beds of fine white sandstone, and resting against the granite in a highly inclined position. This rock contains well preserved remains of terebratulæ, productus, and other bivalve shells. These are usually found on or near the surface of large nodules of a fine flinty stone, closely resembling petrosilex. The same rock also contains an extensive bed of iron ore; and from its eastern side flows a copious brine spring.

About this spring, which had evidently been much frequented by animals, we saw the skulls of the male and female big horn, the bones of elk, bison, and other animals.

The granite, which succeeds the sandstone last mentioned, is of a dark reddish brown colour, containing a large proportion of felspar, of the flesh-coloured variety, and black mica. The crystalline grains, or fragments of the felspar, are large, and [202] detached easily, so that the rock is in a state of rapid disintegration. This granite rises abruptly in immense mountain masses, and undoubtedly extends far to the west.

The little river, on which our camp is situated, pours down from the rugged side of the granitic mountain through a deep inaccessible chasm, forming a continued cascade of several hundred feet. From an elevation of one or two thousand feet on the side of the mountain, we were able to overlook a considerable extent of secondary

region at its base. The surface appeared broken for several miles; and in many of the valleys we could discern columnar and pyramidal masses of sand-rock, sometimes entirely naked, and sometimes bearing little tufts of bushes about their summits.

Here met with a female bird, which closely resembles, both in size and figure, the female of the black game (*tetrao tetrix*); it is, however, of a darker colour, and the plumage is not so much banded; the tail also seems rather longer, and the feathers of it do not exhibit any tendency to curve outward, which, if we mistake not, is exhibited by the inner feathers of the tail of the corresponding one of the black game.

Its general colour is a black brown, with narrow bars of pale ocraceous; plumage near the base of the beak above tinged with ferruginous; each feather on the head, with a single band and slight tip, those of the neck, back, tail coverts, and breast, two bands and tip, the tips on the upper part of the back and on the tail coverts are broad and spotted with black, with the inferior band often obsolete; the throat and inferior portion of the upper sides of the neck are covered with whitish feathers, on each of which is a black band or spot; a white band on each feather of the breast, becoming broader on those nearer the belly; on the belly, the plumage is dull cinereous with concealed white lines on the shafts; [203] the wing coverts and scapulars, about two banded with a spotted tip and second band, and with the tip of the shaft white; the primaries and secondaries have whitish zigzag spots on their outer webs, the first feather of the former short, the second longer, the third, fourth, and fifth equal, longest feathers of the sides with two or three bands and white spot at the tip of the shaft; inferior tail coverts, white with

a black band and base, and slightly tinged with ocraceous on their centres; legs feathered to the toes, and with the thighs pale, undulated with dusky; tail rounded with a broad terminal band of cinereous, on which are black zigzag spots; on the intermediate feathers are several ocraceous spotted bands, but these become obsolete and confined to the exterior webs on the lateral feathers, until they are hardly perceptible on the exterior pair; a naked space above and beneath the eyes. It may be distinguished by the name of the Dusky Grouse (*tetrao obscurus*, S.).

When this bird flew, it uttered a cackling note a little like that of the domestic fowl; this note was noticed by Lewis and Clarke in the bird which they speak of under the name of the cock of the plains, and to which Mr. Ord has applied the name of *tetrao fusca*; a bird which, agreeably to their description, appears to be different from this, having the legs only half booted; the "fleshy protuberance about the base of the upper chop," and "the long pointed tail" of that bird may possibly be sexual distinctions.

It appears by the observations of Lewis and Clarke, that several species of this genus inhabit the country which they traversed, particularly in this elevated range of mountains, from whence, amongst other interesting animals, they brought to Philadelphia a specimen of the spotted grouse (*T. canadensis*); which, together with the above described bird, are now preserved in the Philadelphia Museum, thus proving that the spotted grouse is an inhabitant of a portion of the territory of the United States.

[204] In the evening, a thunder-storm rose in the east. It appeared for some time to approach, the thunder being loud and frequent, but at length moved off towards the

south-east, continuing visible in the horizon during great part of the night.

July 11th [10th and 11th]. From our encampment we travelled nearly south, and crossing a small ridge dividing the waters of the Platte from those of the Arkansa, we halted to dine on a tributary of the latter river.¹⁴⁶ In an excursion from this place, we collected a large species of columbine, somewhat resembling the common one of the gardens. It is heretofore unknown to the flora of the United States, to which it forms a splendid acquisition. If it should appear not to have been described, it may receive the name of *aquilegia coerulea*.¹⁴⁷ Our road during

¹⁴⁶ The route described on the next few pages is an impossible one. Chittenden characterizes it as "wholly indefinite and unsatisfactory" (*American Fur Trade*, p. 59). The date "July 12th," on the next page, does not appear in the Philadelphia edition, and was apparently inserted to remedy the confusion; it increases it, however, since the accounts of the journeys of two days (July 10 and 11) are intermingled in the text itself. From the camp of July 8 and 9, the party might, by noon of the tenth, have arrived opposite Castle Rock, which gives its name to the present seat of justice of Douglas County. This, however, would not bring them to a tributary of the Arkansas; by noon of July 11 they could have reached the upper waters of Monument, a branch of Fountain Creek, which unites with the Arkansas at Pueblo. The camp of July 10 is probably accurately located on the map, a short distance below Castle Rock. On the morning of the eleventh, the direction taken was almost due south, across the watershed between the Platte and Arkansas, which at this point is almost on the line between Douglas and El Paso counties. The map exaggerates the length of Boiling Spring Creek (see succeeding volume, note 10), or Fountain Creek, a branch of which (Monument Creek) they first encountered almost on the county line. The afternoon march carried them somewhat south of the base of Pike's Peak, necessitating the retracing of their route on the morning of the twelfth. The route on the eleventh probably lay through the region now famous as the Garden of the Gods.—ED.

¹⁴⁷ *A. coerulea*, JAMES.—Leaves twice ternate; flowers terminal, remote, nectaries strait and very long. It inhabits shady woods of pine and spruce within the mountains, rising sometimes to the height of three feet. In passing from the headwaters of the branch of the Platte, called Defile creek, to those of one of the northern tributaries of the Arkansa, we noticed some change in the soil, and soon met with many plants we had not before seen. Several of these,

the morning lay for about twelve miles close along the foot of the primitive mountain, having on our left some of the sandstone ridges and hills already described. On our right, the brown and naked granite rose in shapeless masses far above our heads; and occasionally, as we passed the deep fissures worn by the descending torrents, we caught a view of the distant summits glittering with eternal frosts. In the valleys towards the east were many insulated and lofty hills, with perpendicular sides, and level table-like summits. They are sometimes disposed in parallel, but interrupted ranges, and sometimes irregularly scattered, without any appearance of order. In every instance they were found to be the remains of extensive beds of sandstone; insulated portions of which had been preserved from disintegration, while all the contiguous parts had crumbled down and been washed away.

One of these singular hills, of which Mr. Seymour has preserved a sketch, was called the Castle Rock, on account of its striking resemblance to a work of art. It has columns, and porticoes and arches, and [205] when seen from a distance has an astonishingly regular and artificial appearance.

July 12th. [10th and 11th cont'd.]. On approaching it, the base is found enveloped in an extensive accumulation of soil, intermixed with fragments of rapidly disintegrating sandstone. The lower portions of the perpendicular sides of the rock are of loosely cemented pudding-stone, but the

as the common juniper and the red cedar, (*Juniperus virginiana*, Ph.) the black and hemlock-spruce, (*Abies nigra* and *A. canadensis*) the red maple (*Acer rubrum*, Mx.) the hop horn-beam (*Ostrya Virginica*, L.) the *Populus tremuloides*, Mx. *Pinus resinosa*, *Pyrola secunda*, *Orchis dilatata*, etc. are common to mountainous districts in all the northern parts of the territory of the United States; many others are here found, which require more careful and extensive comparison with the plants of Mexico, Siberia, and other countries, than we have yet had the opportunity to make.— JAMES.

summit is capped by a compact and somewhat durable sand-rock. This is surmounted by a scanty soil, in which are a few stunted oaks and junipers.

We had seen no bisons for several days, but in the afternoon a few were discovered at a distance from our course, and three men despatched in pursuit of them. They were grazing on the side of a hill near a mile distant. As provisions were growing scarce with us, we watched the progress of the hunters with some anxiety. At length the firing commenced, and we enjoyed a distant, though distinct view of the animating spectacle of a bison hunt. In a short time the hunters joined us with their horses loaded with meat.

We halted to dine on the tributary of the Arkansa before mentioned, nearly opposite the Castle Rock. Intermixed with the grass upon which we sat down to our dinner, we observed a small campanula, with a solitary terminal flower, about as large as that of the common hare-bell (*C. decipiens*). This species we believe to be identical with the *C. uniflora* of Europe, which has not been heretofore noticed in the United States.

In the afternoon we moved on, descending the little stream on which we had halted for dinner. Like the small branches of the Platte, it is inhabited by great numbers of beavers; but it has more timber, and a more fertile soil than any stream of similar magnitude we had lately passed. Some light showers occurred in the middle of the day, and at evening a thunder-storm was observed, in the same manner [206] as on the preceding day, to collect in the east, and after we had listened to its thunders for some time, it moved off in the direction of the Arkansa, but no rain fell where we were. In the course of the day several elk were seen, and at evening we killed an antelope. Robins are

here frequent, and a jerboa was seen resembling the *gerbillus canadensis*; many fine plants were collected, several of which are hitherto undescribed.¹⁴⁸

Towards evening, our guide discovered we had already passed considerably beyond the base of the peak, near which it had been our intention to halt. He also perceived at the same moment, he had arrived at the very spot where some years ago he had been made prisoner by a party of Spaniards, who took him to Santa Fé.¹⁴⁹ As we were particularly desirous of visiting the mountains at the point designated in many maps as the highest "peak," we resolved to return upon our course, but as it was now near sunset, we thought it advisable to encamp for the night.

Our journey in the afternoon had been pursued in a bison path, and although not in the direction of our proper course, and serving only to prolong our march without advancing us towards the end of our pilgrimage, yet it brought us near to that romantic scenery which for many days we had chiefly contemplated with a distant eye. We entered the secondary range along the margin of a deep ravine, which wound with a serpentine course towards the base of the

¹⁴⁸ One of these is a large and conspicuous plant of the natural family of the *Crucifera*, which may be referred to the new genus, Stanley of Nuttall, and distinguished as *S. integrifolia*; stem simple, leaves entire, ovate oblong, tapering to both ends; stem angular. Flowers in a terminal raceme, which is a little branched below; about six inches in length; stipe of the silique, about as long as the pedicle; flowers large yellow. The whole plant, seen at a little distance, has a remote resemblance to *Lysimachia thyrsifolia*. The leaves are $\frac{5}{8}$ inches long, $\frac{3}{8}$ wide, glaucous, and veined, nearly resembling those of the common cabbage, but smoother, which they are not wholly unlike in taste. The calyx is large, and of a brighter yellow than the other parts of the flower: it inhabits the summits of the sandstone ridges, along the base of the mountains. The *S. pinnatifida*, N., the original type of this genus, was found by its discoverer, Mr. Nuttall, to act as a violent emetic. It had been eaten by several of the party who accompanied him, as a substitute for cabbage.—JAMES.

¹⁴⁹ He was probably a member of the party of Chouteau and De Munn, arrested in 1817. See *ante*, note 134.—ED.

mountain. Our progress was sometimes impeded by huge rocky masses which had been precipitated from some neighbouring height; and sometimes by a dense forest of very limited extent, or an immense impending wall or oblique buttress of rock, which, by its proximity to the eye, vied with the grandeur of the ascending piles beyond.

July 12th. On the morning of the 12th we retraced our path of the preceding day, until a small [207] stream running towards the north-east offered us a change of scenery, and a course more in the direction we wished to pursue.¹⁸⁰ The inequalities of the surface were greater than in the route of the preceding evening. The precipitous character of several of the passes thoroughly tested the confidence we felt in our sure-footed, but now wearied and exhausted Indian horses and mules. Our rude pathway skirted along the base of an elevated ridge, on whose side, far above our heads, projected a narrow ledge of rocks, frowning defiance to all attempts to scale the steep. This ledge declined gradually as we proceeded, until it terminated abruptly on the edge of a profound gulph. Here appeared to be the only spot at which the ridge could be ascended. On the brow of the cliff, a fragment of rock and a small portion of earth were suspended by the binding roots of a solitary pine, offering a frail and precarious foothold. This we chose to ascend, startling and hazardous as the attempt appeared, rather than retrace our steps for several miles, and search for a passage in some other direction. The projecting ledge by which we had ascended, had barely sufficient width to admit the passage of a single individual at a time. When we had gained the summit, we allowed our exhausted animals a moment's rest in the partial shade of some straggling oaks, and con-

¹⁸⁰ Probably one of the branches of Cheyenne Creek.— Ed.

templated, not without a feeling of terror, the yawning gulph at our feet. This emotion was much enhanced by reflecting, that a single misstep of a horse, or the sliding of a fragment of stone in our narrow path, would have been sufficient to have precipitated us into the abyss. We thus pursued our route, marked out to us by the bison, who always trace the most direct and best course, until turning the side of a mountain¹⁸¹ of moderate elevation, the ocean of prairie again spread before us. This monotonous plain, of which we had been hitherto so weary, now burst upon the sight, and for a moment [208] exhibited a cheerful and pleasant contrast to the rude mountain ruins, that we had with such toil and hazard been clambering over. This charm was, however, soon to be dispelled. On descending to the plain, it became as usual desirable to find a good situation for an encampment, abounding with grass for the horses, and convenient to a water course. For this purpose, one of the party rode to a small line of timber about a mile on our left, which ran in a parallel direction to our line of march. He overtook us again at the distance of two or three miles, having discovered a copious stream of water. It was about three miles below the point at which the water had been discovered that we gained the line of timber, only to experience the mortification of disappointment in finding a naked bed of sand, the stream having, no doubt, sunk into the earth some distance above. We had, therefore, to undergo the pains of abstinence still longer, until we again sought the timber further below, where the water had reappeared on the surface.

Near this encampment, we first observed the great shrubby cactus¹⁸² which forms so conspicuous a feature in

¹⁸¹ Cheyenne Mountain (?).—ED.

¹⁸² *Cactus cylindricus* of Humboldt.—JAMES.

the vegetable physiognomy of the plains of the Arkansa. Its trunk is six or eight feet in height, and at the root five or six inches in diameter. It is much branched, the ultimate divisions consisting of long cylindric articulations. The flowers are as large as those of the *C. ferox*, of a purple colour, and are placed on the ends of the articulations. These last are arranged somewhat in whorls about the ends of the smaller branches. The surface of every part of the plant, aside from its terrific armature of thorns, is marked by little prominences of near an inch in length, and about one-fourth of an inch in breadth, rising considerably, and bearing a cluster of radiating spines. These are of various lengths, one pointing [209] obliquely upward, being commonly much the largest. At their insertion, these thorns are surrounded by pungent setæ in the manner of *C. ferox*. The whole plant is so thickly beset with strong spines pointing in every direction, that no large animal can approach it unharmed. It does not form thickets, but each plant is a cluster by itself; and when first seen at a distance, they were mistaken for bisons. We were informed by one of our engagees, who had penetrated the Spanish provinces as far as Monterey, that this plant is common there, and its fruit much esteemed. The nopals are considered characteristic of warm and dry climates, like those of Egypt and California.¹⁸⁸ Perhaps there is no part of the world where plants of this family constitute so large a proportion of the vegetable products of the soil, as in the arid plains of the Arkansa. These plains are sufficiently dry; but like those of the Platte and Upper Missouri, where cacti are almost equally abundant, they are visited by very severe cold in winter.

¹⁸⁸ Humboldt's Personal Narrative, vol. i. p. 362. Philadelphia Edit.—JAMES.

Another highly interesting plant, which occurs in the most barren and desolate parts of the plain, is a cucurbitaceous vine resembling some of our common squashes, bearing a small pepo, which is round and smooth, and as large as an orange. It is perennial, having a somewhat lignous root four or five inches in diameter, and descending often more than four feet into the earth. We were so fortunate as to meet with it in flower, and also with ripened fruit. It has the acutely margined seed of the genus *cucumis*, but in other respects is closely allied to *cucurbita*.¹⁸⁴ In addition to these, we collected the *zigadenus elegans*, Ph., *asclepias tuberosa*, and some others.

¹⁸⁴ *Cucumis perennis*, S.—Calyx, seated upon the germ, rugose, coloured campanulate, exterior divisions subulate.

Masc. Three filaments, short, closely covering the central disc. Fem. Style short, stigmas three bipartite.

Fruit. Pome large, orbicular, smooth, about four celled seeds, ovate, gibbous, margin acute; dissepiments torn, spongy; seeds in a double order; leaves alternate, triangularly cordate, margin undulate, tendrils axillary trichotomous; stems numerous, procumbent, grooved; flowers nearly as large as those of *Cucurbita pepo*; fruit round, smooth, and green, nearly sessile, resembling a small unripe water-melon. The leaves are rough, of a glaucous green colour, bitter and nauseous to the taste, and the whole plant emits a foetid odour.

Root fusiform, very large, six feet in length, and often four inches in diameter, descending perpendicularly into the earth. It inhabits the arid and sandy wastes, along the base of the Rocky Mountains, from the confluence of the Arkansa, and Boiling Spring Fork, to the sources of Red River. By means of its long and somewhat succulent root it is peculiarly adapted to the soil it occupies, and is found to thrive with considerable vigour in wastes whose thirsty and burning soils bid defiance to almost every other vegetable. It flowers in July, and continues flowering and perfecting fruit during the summer. Some plants of this interesting species are growing in the garden of the University of Philadelphia, from seeds brought by Major Long, but they have not yet flowered. The leaves are thick and robust, from six to eight inches long, and four or five in width, on foot-stalks equalling the leaves in length; they are crowded along the stems, and usually stand erect. It does not appear that any insect or animal preys upon the leaves or other parts of this plant. It forms, by its deep green, a striking contrast to the general aspect of the regions it inhabits, which are exceedingly naked and barren.

This plant has been mentioned by Mr. Brackenridge, from the information of hunters, but no detailed account of it has hitherto been given. The annexed

From an elevated ridge which we passed in the morning, some bisons had been seen, at the distance [210] of five miles; and as we were in want of game, Mr. Peale, with two hunters, rode forward in the pursuit of them. They overtook the herd near a small creek, and attacked one of the largest, which was at length killed. In examining the body, it was found twenty balls had entered in different parts before the animal fell. They arrived at camp, bringing the meat, at a little after noon.

The small stream on which we encamped had some timber along its valley. In this, four deer had been killed; so that we now had provisions in great plenty.¹⁸⁵

figure is from a drawing by Mr. Peale, made of the plant in its native locality. The petioles and the extremities of the stems are usually affected with morbid enlargements, resembling galls. They may perhaps be caused by the irritation of the intense reflected light and heat of the sun, in the situations where the plant usually grows. In the gardens it has not hitherto produced these enlargements. — JAMES.

¹⁸⁵ 1. *Fringilla psaltria*, SAY.— A very pretty little bird, was frequently seen hopping about in the low trees or bushes, singing sweetly, somewhat in the manner of the American gold-finch, or Hemp-bird (*Fringilla tristis*). The tints, and the distribution of the colours of its plumage resemble, in a considerable degree, those of the autumnal and less brilliant vesture of that well-known species. It may, however, be distinguished, in addition to other differences, by the black tip of its tail-feathers, and the white wing spot.

The head is capped with black; the cheeks are dusky; the bill yellow, with a black tip; iris burnt umber; neck above, and half its side, back, and rump olivaceous, more or less intermixed with dusky; smaller wing coverts blackish, edged with olivaceous; greater wing coverts brown-black, tipped with white, forming a narrow band; primaries fuscous, and, excepting the exterior one, slightly edged with white; third, fourth, and fifth feathers white towards the base, so as to exhibit a white spot beyond the wing coverts; secondaries margined with white exteriorly towards their tips: tail coverts black, varied with olivaceous on their shafts; tail emarginate, feathers blackish, slightly edged with dull whitish; the three exterior ones pure white on their inner webs, excepting at base and tip; all beneath yellow; feet pale. A specimen is deposited in the Philadelphia Museum.

2. *Fringilla frontalis*, SAY.— Crimson-necked Finch. Head, throat, neck beneath, and upper portion of the breast brilliant crimson, most intense near the bill and over the eyes; rump and tail coverts paler crimson; between the bill and

From this camp we had a distinct view of the part of the mountains called by Captain Pike the highest peak. It appeared about twenty miles distant, towards the north-west.¹⁸⁶ Our view was cut off from the base by an intervening spur of less elevation; but all the upper part of the peak was visible, with patches of snow extending down to the commencement of the woody region.

At about one o'clock P. M. a dense black cloud was seen to collect in the south-west; and advancing towards the peak, it remained nearly stationary over that part of the mountains, pouring down torrents of rain. The thunder

the eye grey; *bill* dark horn colour, lower mandible paler; *vertex*, *occiput*, *neck above* and *each side* brown, tinged with reddish, the feathers margined with pale; *back* dusky brownish; *wings* and *tail* fuscous, the latter feathers edged on the inner side with white; the *primaries* broadly margined within, towards the base, with white, and exteriorly edged with a grayish; *coverts* and *tertials* edged with dull grayish; *inferior portion of the breast*, the *belly*, and *vent* whitish, each feather with a broad fuscous line.

Female, dusky brown, the feathers margined each side with dull whitish; *wings* fuscous, the margining and edging of the feathers not as distinct as in the male; all *beneath*, excepting the tail and wing feathers, whitish, each feather with a brown streak.

This bird is much more closely allied, both in size and colouring, to the purple Finch (*F. purpurea*) than to the crimson-headed Finch (*F. rosea*), and may prove to be only a variety of it, when a comparison of many individuals can be made. The male, from which the above description is drawn out, may not be in its ultimate state of plumage, as it seems probable that the middle of the head, the upper part of the neck, and the back, in the perfect plumage, is more obviously tinted with crimson than we have observed those parts to be. It differs, however, from the *Purple Finch* in the tint of the crimson colour, which is far more lively and brilliant, and also in having each feather of the belly, vent, and inferior tail coverts broadly streaked with brown. We apply to it provisionally the name of *F. frontalis*. A prepared specimen of this bird is in the Philadelphia Museum.—JAMES.

¹⁸⁶ Having followed in general the course of Cheyenne Creek, the party must have encamped a short distance south of the site of Colorado Springs, where the stream flows into Fountain Creek. From this point there is a magnificent view of Pike's Peak, which Pike himself usually called Grand Peak. His estimate of the height was 18,581 feet; the error was due partially to his assumption of the excessive elevation of 8,000 feet for the plain at the base. See the estimate of Lieutenant Swift, in succeeding volume, note 11.—ED.

was loud and frequent; and though little rain fell near our camp, the creek soon began to swell; and before sunset it had risen about six feet, and again subsided nearly to its former level. When the stream began to rise, it was soon covered with such a quantity of bison's dung, suddenly washed in from the declivities of the mountains and the plains at its base, that the water could scarcely be seen. About this time our cook filled his kettle, and put into it the meat intended for supper; but when the soup was brought to our tent, the flavour of the cow-yard was found so prevalent, and the meat so filled with sand, that very little could be eaten.

[211] As one of the objects of our excursion was to ascertain the elevation of the peak, it was determined to remain in our present camp for three days, which would afford an opportunity for some of the party to ascend the mountain.

[261] APPENDIX A

ANIMALS

A Catalogue of the Names of Animals, which we observed at Engineer Cantonment, or at other indicated places, on our journey to that post.

MAMMALIA

- Vespertilio novaboracensis*, L.— New-York bat.
—— *Carolinus*, Geoff.— Carolina bat.
Scalops aquaticus — Mole.
Ursus Americanus, (*gularis*, Geoff.) — Black bear.
Procyon lotor — Racoon.
Taxus labradoricus — Badger.
Mustela minx — Mink.
—— *vison*.
Mephitis putorius (*chinche*, Buff. Cuv.) — Skunk.
Lutra (*mustela lutra Braziliensis*, Gm. Cuv.) — Otter.
Canis — Indian dog.
—— *lycaon* — Black wolf.
—— *virginianus* — Red fox.
—— *cinereo-argenteus* — Gray fox.
Felis concolor — Cougar.
—— *ruja* — Bay lynx.
Didelphius virginiana — Opossum.
Castor fiber — Beaver.
Ondatra Zibethicus — Musk-rat.
Gerbillus Canadensis — Leaping-mouse.
Arctomys monax — Maryland marmot.
Mus agrarius ? — Rustic mouse.

Arvicola Zanthognatha, Leach — Meadow mouse
(on the Ohio).

[262] *Mus musculus* — introduced by our expedition.

Pseudostoma bursaria — Pouched rat.

Sciurus cinereus — Gray squirrel.

—— *capistratus* — White-nosed do.

—— *striatus* — Ground do.

—— *nigra* — Black do.

Lepus Americanus — Rabbit.

Cervus major — Elk.

—— *Virginianus* — Virginian deer.

Antilocapra Americana, Ord. — Prong-horned antelope.

Bos bison, Gmel. — Bison.

BIRDS

Vultur (*Cathartes Illig.*) *aura* — Turkey buzzard.

Falco (*Haliaetus*, Sav.) *leucocephalus* — Bald eagle.

—— (*Pandion*, Sav.) *haliatus* ? — Fish-hawk.

—— (*Accipiter*, V.) *ruficaudus*, Vieil. (*F. Borealis*, L. Wilson) — American buzzard, Lath.

—— (*Circus*, Bech.) *uliginosus* — Marsh-hawk.

—— *Buteo* (*galinivorus*, Vieil.) — Great hen, H.

—— (*Milvus*, Bech.) *furcatus* — Swallow-tailed falcon, Lath.

—— (*Tinnunculus*, Vieil.) *sparverius* — American sparrow-hawk.

—— (*Aquila*, Briss.) *fulvus* — Ring-tailed eagle, Wilson; war-eagle of the Omawhaws.

—— *lineatus*, Gm. Wils. — Red-shouldered hawk, Mississippi.

—— *Mississippiensis*, Wilson — Mississippi kite.

—— *velox*, Wilson — Sharp-shinned hawk.

- *Pennsylvanicus*, Wilson — Slate-coloured hawk.
- Strix* (*Otus*, Cuv.) *otus* — Long-eared owl.
- (*do.* *do.*) *Virginiana* — Virginian-eared owl, Lath.
- (*do.* *do.*) *asio* — Red-eared owl, Lath. — Screech-owl.
- [263] *Strix* (*Uhu*la, Cuv.) *nebulosa* — Barred-owl. Lath.
- (*Noctua*, Savig.) *phalaenoides*, Dand. Vieil.
- (*do.* *do.*) *passerina*, Wilson.
- (*do.* *do.*) *Hudsonia* — Hawk-owl, Wilson.
- (*Bubo*, Cuv.) *bubo* — Great owl.
- Lanius borealis*, Vieil. — Great American shrike, Wilson.
- Tanagra Ludoviciana*, Wils. — Louisiana tanager.
- *rubra* — Scarlet tanager.
- Muscapa* (*Tyrannus*, Cuv.) *pipiri*, Vieil. — Tyrant fly-catcher, Wilson.
- (*Tyrannus*, Cuv.) *Ludovicianus* — Louisiana fly-catcher, Lath.
- *Canadensis*, Gm. Wilson. — Canada fly-catcher.
- (*Icteria*, Vieil. *pipra*. Wilson,) *viridis*, L. Yellow-breasted chat, Wils.
- *cantatrix* Bartram, Wils. — White-eyed fly-catcher.
- (*Mucipeta*, Cuv.) *ruticilla* — American red-start, Wilson.
- *olivacea* — Red-eyed fly-catcher, Wils.
- *novaboracensis*, Gm. — Green black-capt fly-catcher, Wilson.

- *jusca* — Pewee fly-catcher, Wilson.
Ampelis (Bombycivora, Temm.) Carolinensis, Briss.
 — Cedar-bird, Wilson.
Turdus rufus — Ferruginous thrush.
 ——— *felivox, Vieil.* — Catbird.
 ——— *juscus* — Brown thrush.
 ——— *pollyglottus* — Mocking bird.
 ——— *aurocapillus* — Golden crowned thrush.
 ——— *migratorius* — Red-breasted thrush.
 ——— *aquaticus, Wils.* — Water thrush.
Sylvia solitaria, Wils. — Blue-winged yellow warbler.
 ——— *sialis* — Blue bird.
 ——— *striata, Wilson* — Black poll warbler.
 [264] *Sylvia Ludoviciana, L.* — Blue yellow-backed warbler, Wilson.
 ——— (*Troglodites, Cuv.*) *troglodites? Wilson,* — Winter wren.
 ——— *azurea, Steph. cærulea, Wils.* — Coerulean warbler.
 ——— *æstiva, Lath.*
Certhia Caroliniana, Lath. Wils. — Great Carolina wren.
 ——— *palustris, Wils.* — Marsh wren.
Hirundo Americanus — Barn swallow, Wilson.
 ——— *riparia* — Bank do.
 ——— *pelasgia* — Chimney do.
 ——— *purpurea* — Purple martin.
Caprimulgus Virginianus, L. — Whip-poor-will.
 ——— *porpetue, Vieil.* — Night hawk.
Alauda alpestris, L. Wils. — Shore lark.
 ——— *rubra,* — Red lark.
Parus atricapillus — Black capped titmouse.

Emberiza Americana, L. Wils. — Black throated bunting.

Fringilla (Ploceus, Cuv.) erythrocephala — Towhee bunting.

———— *socialis*, Wilson. — Chipping sparrow.

———— *oryzivora* — Rice bird.

———— *pecora*, Wils. (*Emberiza*) — Cow bird.

———— (*Cardualis*, Cuv.) *tristis* — Yellow bird.

———— *melodia*, Wilson. — Song sparrow.

———— *purpurea* — Purple finch.

———— *Hudsonia* — Snow bird.

———— (*Linaria*, Bech.) *linaria* — Lesser red-poll.

Loxia (Vidua, Cuv.) cardinalis — Cardinal gross beak.

———— (do. do.) *Ludoviciana* — Rose - breasted gross beak.

———— (*Corythus*, Cuv.) *enucleator* — Pine gross beak.

———— *Curvirostra Americana*, Wilson. — American gross beak.

[265] *Gracula (Icterus, Cuv.) quiscula* — Purple grackle.

Oriolus (Zanthornus, Cuv.) phæniceus — Red-winged starling, Wilson.

———— (*Zanthornus*, Cuv.) *Baltimoreus* — Baltimore bird.

———— (do. do.) *spurius* — Orchard oriole.

———— (do. do.) *icterocephalus* — Yellow-headed oriole.

Sturnus Ludovicianus — Meadow-lark, Wils. The *S. torquatus* of Stephens seems to be the male of this species.

Sitta Carolinensis — White-breasted nuthatch, Wilson.

- *varira* — Red-bellied [nuthatch, Wilson].
Corvus corax — Raven.
 — *corone* — Crow.
 — (*Pica, Cuv.*) *pica* — Magpie.
 — (*Garrulus, Cuv.*) *cristatus* — Blue jay.
Trochilus colubris — Ruby-throated humming-bird.
Alcedo alcyon — Belted kingfisher.
Picus pileatus — Pileated woodpecker, Lath.
 — *erythrocephala* — Red-headed woodpecker.
 — *auratus* — Gold-winged do.
 — *pubescens* — Downy do.
 — *villosus* — Hairy do.
 — *Carolinus* — Red-bellied do.
Psittacus Carolinensis — Caroline perroquet.
Meleagris gallipavo — Turkey.
Tetrao cupido — Pinnated grouse.
 — *umbellus* — Ruffed do.
 — *phasianellus* — Long-tailed grouse.
 — (*Perdix*) *Virginianus* — Virginian partridge,
 Wilson.
Columba migratoria — Passenger pigeon. (*C. Cana-*
densis is the female, Temm.)
 — *Carolinensis* — Caroline pigeon or dove.
Charadrius vociferus — Kildeer.
 [266] *Charadrius plumialis* — Golden plover.
Ardea (Grus, Cuv.) Americanus — Hooping crane.
 — (*do. do.*) *Canadensis* — Sandhill do.
 — *herodias* — Great heron.
 — *virescens* — Green heron.
 — *nycticorax* — Night-heron.
Numenius longirostra — Long-billed curlew.
Scolopax minor — Little woodcock.
 — (*Totanus*) *semipalmata* — Willet.

- (*Totanus*) *melanoleucus*, Vieil. — Stone curlew.
 ——— (*do*) *vociferus* — Telltale godwit.
Tringa solitaria, Wilson. — Solitary sandpiper.
 ——— *Bartramia*, Wilson. — Bartram's sandpiper.
 ——— *semipalmata*, Ord. — Semipalmated sandpiper.
Scolopax flavipes, Gm. Wils. — Yellow-shanks snipe.
 ——— *jedoa*, L. Wilson. — Great marbled godwit.
Recurvirostra Americana — American avocet.
Colymbus glacialis — Great northern diver.
 ——— (*Podiceps*, Lath.) *cornutus* — Horned grebe.
Fulica Americana — Common coot.
Larus ridibundus? — Laughing gull.
Sterna aranea, Wilson. — Marsh tern.
 ——— *minuta* — Lesser tern.
Pelecanus erythrorhynchos — Rough-billed pelican.
 ——— *fuscus* — Brown pelican.
 ——— (*Phalacrocorax*, Briss.) *carbo* — Corv-rant.
Anas (*Cygnus*, Meyer) *cygnus* — Swan.
 ——— (*do*) *Canadensis* — Canada goose.
 ——— (*Anser*, Briss.) *hyperborea* — Snow goose.
 ——— (*do*) *bernicle*? — Barnacle goose.
 ——— (*do*) *albifrons* — White-fronted goose.
 [267] *Anas discors* — Blue-winged teal.
 ——— *albeola* — Buffle-headed duck.
 ——— *boschus* — Wild duck.
 ——— *sponsa* — Summer duck.
 ——— *marila* — Scaup duck.
 ——— *acuta* — Pin-tailed duck.
 ——— *glacialis* — Long-tailed duck.

- *clangula* — Golden-eye.
 —— *Americana* — American widgeon.
Mergus serrator — Red-breasted merganser.
 —— *cucullatus* — Hooded do.

REPTILIA

Testudo clausa. — This is our common land tortoise. It rarely, if ever, enters the water voluntarily, and is therefore decidedly terrestrial.

Testudo (*Emys*, Brogni.) *geographica*, Lesueur.

—— (do. do.) *serpentaria* — Serpent tortoise.

—— (*Trionix*, Geoff.) *ferox* — Fierce tortoise.

Lacerta (*Agama*) *undulata*, Daud.

—— (*Scincus*) *5-lineatus*.

Coluber constrictor — Racer.

—— *ordinatus* — Garter snake.

—— *heterodon* — Hog-nose snake.

Crotalus horridus, L. — Banded rattlesnake.

—— *durissus*, L. — Diamond rattlesnake.

Rana pipiens, Daud. (*R. Catesbeana*, Shaw.) — Bull-frog — Ohio.

Rana helecina, Kalm. Daud. (*R. pipiens*, Schreb. Shaw.) — Shad-frog — Ohio.

Rana clamata, Daud.

—— (*Hyla*) *ocularis*, Daud. — On the Ohio, near Shippingsport. This species is subject to vary considerably. In addition to the lateral vitta, it has sometimes three dorsal vittæ: other specimens have a remarkable cruciform mark on the back.

Rana (*Hyla*) *femorialis*, Daud. — Ohio.

—— (*Bufo*) *musicus* — Common toad.

[268] *Salamandra subviolacea*, Barton — near Shippingsport.

———— *longicauda*, Green — near Pittsburgh.

———— *rubra*, Daud. — Ohio.

———— *cinerea*, Green — near Shippingsport.

———— (Triton, Laur.) *Alleganiensis* (Salam. gigantea, Barton) — Pittsburgh.

The following observations were made, relative to the arrival and departure of birds at Engineer Cantonment. A few notes are added, which were made at Pittsburgh and other places.

Vultur aura — Arrived April 2. 1820. On the Ohio, observed May 9. 1819.

Falco haliaetus — Flying north May 17. 1820.

———— *furcatus* — Was seen 20.

The *Falco* and *Strix* families generally winter here.

Tanagra rubra — Arrived May 1. 1820. At Pittsburgh, arrived April 29. 1819.

Muscicapa olivacea arrived April 30. 1820.

———— *cantatrix* — 30.

———— *ruticilla* — 28. 1820. On the Ohio, observed May 8. 1819.

Muscicapa fusca arrived March 22. 1820.

———— *pipiri* — May 7. 1820. On the Ohio, observed May 8. 1819.

Turdus fuscus arrived April 28. At Pittsburgh the 14th.

Turdus aurocapillus arrived April 26. 1820.

———— *aquaticus* — 26.

———— *migratorius* — 11.

———— *felivox* observed on the Ohio, May 8. 1819.

———— *rufus* do. do. 2. 1820.

Certhia palustris arrived April 15. 1820.

Sylvia striata — 26.

—— *azurea* — 28.

—— *sialis* — a few remain all winter.

Hirundo pelagica arrived May 1. 1820. At Pittsburgh, arrived April 27. 1819.

[269] *Hirundo purpurea* arrived March 30. 1820. At Pittsburgh, April 14. 1819.

Hirundo Americana — At Pittsburgh, arrived April 21. 1819.

Caprimulgus Virginianus arrived April 19. 1820. At Pittsburgh, heard May 5. 1819.

Caprimulgus porpetue arrived May 16. 1820. On the Ohio, observed May 6. 1819.

Caprimulgus rufus, Vieil. — heard on the Ohio, June 2. 1819.

Parus articapillus — all winter.

Fringilla erythrocephala arrived March 22. 1819.

—— *purpurea* seen Feb. 28.

—— *Hudsonica* departing April 11.

—— *oryzivora* arrived May 14.

—— *linaria* — Feb. 1.

—— *tristis* remains during the winter.

Loxia Ludoviciana, observed May 1. and 6. 1819.

—— *Americana* — Feb. 21. 1819.

—— *cardinalis* — on the Ohio, May 8. 1819.

—— *enuncleator* — occasionally seen during the winter.

Oriolus icterocephalus, observed May 14. 1820.

—— *phaeniceus* — March 1.

—— *Baltimoreus*, observed near Pittsburgh, April 29. 1819.

Sturnus Ludovicianus arrived April 5. 1820.

Sitta Carolinensis remains all winter.

Corvus pica retired northward, March 23. 1820.

—— *corax* — the young nearly able to fly, May 12. 1820.

Trochilus colubris arrived May 18. 1820. On the Ohio, May 6. 1819.

Alcedo alcyon arrived March 20. 1820.

Picus erythrocephalus arrived March 20. 1820.

—— *auratus* and some others remain all winter; but the *erythrocephalus* is entirely migratory.

Picus pileatus — seen Feb. 28. 1820.

[270] *Psittacus Carolinensis* — seen several times during the winter: near Louisville, May 25. 1819.

Columba migratoria arrived May 2. 1820.

—— *Carolinensis* arrived April 30. 1820.

Ardea Americanus arrived March 19. 1820.

—— *virescens* seen on the Ohio May 6. 1819.

—— *Canadensis* arrived May 24. 1820.

Numenius longirostra arrived April 1. 1820. Was seen on the top of the Alleghany mountain March 24. 1819.

Curvirostra Americana — seen Feb. 20. 1820.

Scalopax vociferus arrived March 19. 1820. At Pittsburgh, observed May 5. 1819.

Scolopax semipalmata arrived May 6. 1820.

—— *minor* — April 8.

Tringa solitaria — 30. 1820. At Pittsburgh, observed May 15. 1819.

Colymbus cornutus arrived May 5. 1820.

Larus ridibundus — in large flocks, flying northward, May 4. 1820. They were seen at Pittsburgh April 3. 1819.

Sterna minuta arrived April 2. 1820.

Pelecanus erythrorhynchos arrived April 8. 1820.

—— *carbo* arrived April 10. 1820. At Pittsburgh, arrived May 5. 1819.

Anas cygnus — flying to the north Feb. 22. 1820.

—— *canadensis* do. do. 21.

—— *acuta* shot 28.

—— *Americana* shot March 3.

—— *sponsa*, with their young, May 30. 1819.

The great emigration of geese, swans, ducks, and cranes, commenced on the 22d of February, and terminated the latter end of March, 1820.

[271] APPENDIX B

INDIAN LANGUAGE OF SIGNS

1. *Sun* — The fore-finger and thumb are brought together at tip, so as to form a circle, and held up towards the sun's track. To indicate any particular time of the day, the hand with the sign of the sun, is stretched out towards the east horizon, and then gradually elevated, to show the ascent of that luminary, until the hand arrives in the proper direction, to indicate the part of the heavens in which the sun will be at the given time.

2. *Night, or sleeping* — The head, with the eyes closed, is laterally inclined for a moment upon the hand. As many times as this is repeated, so many nights are indicated; very frequently the sign of the sun is traced over the heavens, from east to west, to indicate the lapse of a day, and precedes the motion; it also precedes the following —

3. *Darkness* — The hands extended horizontally forwards, and back upwards, pass one over the other, two or three times touching it.

4. *Combat* — The clenched hands are held about as high as the neck, and five or six inches asunder, then waved two or three times laterally, to show the advances and retreats of the combatants; after which the fingers of each hand are suffered to spring from the thumb towards each other, as in the act of sprinkling water, to represent the flight of missiles.

5. *Prisoner* — The fore finger and thumb of the left

hand are held in the form of a semicircle, opening towards and near the breast, and the fore finger [272] of the right representing the prisoner, is placed upright within the curve, and passed from one side to another, in order to show that it will not be permitted to pass out.

6. *Man* — A finger held vertically.

7. *Seeing* — The fore-finger, in the attitude of pointing, is passed from the eye towards the real or imaginary object.

8. *Seen, or discovered* — The sign of a man, or other animal, is made; after which the finger is pointed towards, and approached to your own eye; it is the preceding sign reversed.

9. *Entering a house or lodge* — The left hand is held with the back upward, and the right hand also with the back up, is passed in a curvilinear direction down under the other, so as to rub against its palm, then up on the other side of it. The left hand here represents the low door of the skin lodge, and the right, the man stooping down to pass in.

10. *Theft* — The left fore-arm is held horizontally, a little forward or across the body, and the right hand passing under it with a quick motion, seems to grasp something, and is suddenly withdrawn.

11. *Hunting* — The fore-finger is brought near the eye, and placed in the attitude of pointing; it is then wagged from side to side, the eye following its devious motion, and seeming to look in the direction indicated. Sometimes the hand is extended far before the eye, and the same motion is given to the finger.

12. *Pretty* — The fingers and thumb, so opposed as to form a curve, are passed over the face nearly touching it, from the forehead to the chin, then add the sign of *Good*, No. 42.

13. *Eating* — The fingers and thumb are brought together in opposition to each other, into something of a wedge shape, and passed to and from the mouth four or five times within the distance of three or four [273] inches of it, to imitate the action of food passing to the mouth.

14. *Drinking, or water* — The hand is partially clenched, so as to have something of a cup shape; and the opening between the thumb and finger is raised to the mouth, as in the act of drinking. If the idea of water only is to be conveyed, the hand does not stop at the mouth, but is continued above it.

15. *Enough, or a bellyful* — The sign for eating is first made; then the fore finger and thumb are opposed to each other so as to form a semicircular curve, which is elevated along the body from the belly to the neck, in order to indicate that the interior is filled with food up to that part.

16. *Squaw* — The hands are passed from the top down each side of the head, indicating the parting of the hair on the top, and its flowing down each side.

17. *The discharging of a gun* — Is indicated by slapping the back of the right hand, partially closed, into the palm of the left.

18. *Death* — By throwing the fore finger from the perpendicular into a horizontal position towards the earth, with the back downwards.

19. *Killing* — The hands are held with the edge upwards, and the right hand strikes the other transversely, as in the act of chopping. This sign seems to be more particularly applicable to convey the idea of death, produced by a blow of the tomahawk or war-club.

20. *Bison* — The two fore fingers are placed near the ears, projecting, so as to represent the horns of the animal.

21. *Surrounding the bison* — The sign No. 20 is first

made; the hands, with the fore fingers and thumbs in a semicircle, are then brought two or three times together.

22. *Discharging the arrow* — The hands are placed [274] as in the attitude of drawing the arrow in the bow, (this is also the sign for the bow) and its departure is indicated by springing the fingers from the thumbs, as in the act of sprinkling water.

23. *To speak* — The motion is like sprinkling water from the mouth by springing the fore finger from the thumb, the hand following a short distance from the mouth at each resilience, to show the direction of the word, or to whom it is addressed; this motion is repeated three or four times.

24. *Haranguing* — The above motion repeated rapidly, the hand at each motion pursuing a different direction, to show that the talk is addressed to various persons.

25. *Quantity, or great number* — The hands and arms are passed in a curvilinear direction outwards and downwards, as if we were showing the form of a large globe; then the hands are closed and elevated, as if something was grasped in each hand, and held up about as high as the face.

26. *Exchange* — The two fore fingers are extended perpendicularly, and the hands are then passed by each other transversely in front of the breast, so as nearly to exchange positions.

27. *Inquiry* — The hand held up with the thumb near the face, and the palm directed towards the person of whom the inquiry is making; it is then rotated upon the wrist two or three times edgewise, to denote uncertainty.

28. *Truth* — The fore finger passed, in the attitude of pointing, from the mouth forward in a line curving a little upward, the other fingers being carefully closed.

29. *Lie* — The fore and middle fingers extended, passed two or three times from the mouth forward; they are joined at the mouth, but separate as they depart from it, indicating that the words go in different directions.

[275] 30. *It is so* — The motion is somewhat like 28., but the finger is held rather more upright, and is passed nearly straight forward from opposite the breast; and when at the end of its course, it seems gently to strike something, though with a rather slow and not suddenly accelerated motion.

31. *Sit down* — The fist is clenched, and the motion of it is then the same as if it held a staff, and gently stamped it upon the earth two or three times.

32. *Travelling with great rapidity* — The hands are held edge up, extended forward and a little sideways, one in advance of the other, though parallel; they then are agitated a little in the manner of a fan, though with a much more rapid and not so wide a motion, the arms being at rest.

33. *Running* — The arm nearly doubled upon itself, and then the elbow thrown forward and backward, as in the act of running.

34. *Riding on horseback* — The index and middle finger of the right hand are straddled over the left index finger, representing the rider and the horse; these are then jolted forward, to represent the trotting motion of the horse.

35. *Knife* — Hold the left hand clenched near the mouth, as if it held one end of a strip of meat, the other end of which was between the teeth; then pass the edge of the right hand, as in the act of cutting, obliquing a little upwards from right to left between the other hand and mouth, so as to appear to divide the supposed meat.

36. *Awl* — The left fore finger is extended, and the right, also extended, is placed across it, and is then turned on its axis, so as to imitate the action of the awl in making a hole.

37. *My offspring* — If an Indian wishes to tell you that an individual present is his offspring, he points to the person; and then, with the finger still extended, [276] passes it forward from his loins in a line curving downwards; then slightly upwards; sometimes saying, "That is my child, *illum minxi*." Dashinga-shinga-we-weet-tah-ohn-na-je.

38. *Strength* — The hands are clenched; the left fore arm is held almost perpendicularly near the breast, so that the fist is nearly opposite to the throat; the right arm is then carried up between the left and the breast, and continued on over the left fist to the outside of the latter; the right arm is then brought down so as to have the same direction with the other, and the fists rest opposite to each other, in a line with the breast. This motion resembles the act of wringing a thick towel. If he would say, "I am strong," he strikes himself upon the breast two or three times with his fist, previously to the motion above described. If he would say, "You are strong," he previously points to you, &c.

39. *Fire* — The act of striking fire with the flint and steel is represented; after which the ascent of the smoke is indicated, by closing the fingers and thumb of the right hand, holding them in a vertical position, with the hand as low as convenient; the hand is then gradually elevated, and the fingers and thumb a little expanded, to show the ascent and expansion of the volume of smoke.

40. *Rabbit* — The fore and little fingers of the right hand are extended, representing the ears of the animal;

the hand is then bobbed forward to show the leaping motion of the animal.

41. *Deer* — The fore finger of the right hand is extended vertically, with the back towards the breast; it is then turned from side to side, to imitate the motion of the tail of the animal when he walks at his leisure.

42. *Good* — The hand held horizontally, back upwards, describes with the arm a horizontal curve outwards.

[277] 43. *Be quiet, or be not alarmed, or have patience* — The palm of the hand is held towards the person.

45. *I will kill you* — Direct the right hand towards the offender, and spring the fingers from the thumb, as in the act of sprinkling water.

46. *Fish* — Hold the upper edge of the hand horizontally, and agitate it in the manner of a fan, but more rapidly, in imitation of the motion of the tail of the fish.

47. *Poor* — The two fore fingers extended, with the right, as if it was a knife, imitate the motion of cutting the flesh off of the left finger, beginning towards the tip, and cutting with a quick motion directed towards the base; at the same time turn the left finger a little round, so as to expose the different parts to the action of cutting; intimating that the flesh has diminished from starvation.

48. *House or lodge* — The two hands are reared together in the form of the roof of a house, the ends of the fingers upward.

49. *Husband, companion, or in company* — The two fore fingers are extended and placed together, with their backs upward.

50. *Snow* — The hand is held up about as high as the head, with the fingers suffered to dangle downwards; it is then bobbed a little up and down, as if to throw off drops from the ends of the fingers.

51. *Rain* — The sign for *water* (No. 14.) precedes that for *snow*.

52. *Robe* — The hands are placed near the shoulders, as if holding the ends of the robe, and then crossed, as if drawing the robe tight around the shoulders.

53. *The coming of a person from a distance* — Place the fore finger in a vertical position, with the arm extended towards the point from which the person came, or is to come; then bring it gradually near the [278] body, but not in contact with it; or if he continued on, carry it in the direction he passed.

54. *Snake* — The fore finger is extended horizontally, and passed along forward in a serpentine line. This is also used to indicate the Snake nation of Indians.

55. *Crow nation of Indians* — The hands held out each side, and striking the air in the manner of flying.

56. *Light* — Make the sign of the sun in the eastern horizon, and then extend the hands together, with the palm upwards, and carry them from each other outwards.

57. *Flat-head nation* — One hand placed on the top of the head, and the other on the back of the head.

58. *Pierced-nose nation* — The finger extended, pass it horizontally by the nostrils.

59. *Trade* — First make the sign of *exchange*, (No. 26.) then pat the left arm with the right finger, with a rapid motion from the hand passing it towards the shoulder.

60. *Sioux nation* — The edge of the hand passed across the throat, as in the act of cutting that part.

61. *Black-foot nation* — The finger and thumb encircle the ankle.

62. *Arrapaho nation* — The fingers of one hand touch the breast in different parts, to indicate the tattooing of that part in points.

63. *Carrying a pack* — The hands are placed each side of the head, as if they held the strap of the *hoppas*, which passes round the forehead, in order to relieve that part, by supporting a portion of the weight of the burden; with this motion, two or three slight inclinations of the head and corresponding movements of the hands are also made.

64. *Pretty* — Another sign, beside that marked [279] No. 43., is the following: curve the fore finger of the right hand, and place the tip on the ridge of the nose between the eyes, so as to represent a high Roman nose; then bring down the hand in a curvilinear manner, until the wrist touches the breast; after which add the sign, No. 42.

65. *No, not, or none* — The hand waved outwards, with the thumb upward. For *yes*, see No. 30.

66. *Destroyed, or all gone, no more* — The hands held horizontally, and the palms rubbed together, two or three times round; the right hand is then carried off from the other, in a short horizontal curve.

67. *Anger* — The fingers and thumb of the right hand, with the ends together, and near the breast; then turn the hand round two or three times, so as to describe verticle circles; indicating that the heart is disturbed.

68. *Dissatisfaction, or discontent* — The extended finger placed transversely before the situation of the heart, rotate the wrist two or three times gently, forming a quarter of a circle each time.

69. *Indecision* — The index and middle fingers extended and diverged, place them transversely before the situation of the heart, and rotate the wrist two or three times gently, forming each time a quarter of a circle.

70. *Fool* — The finger is pointed to the forehead, and the hand is then held vertically above the head, and rotated on the wrist two or three times.

71. *Swiftness* — The two index fingers are held parallel together, and pointing forward; the right one is then passed rapidly forward.

72. *Shienne nation* — With the index finger of the right hand proceed as if cutting the left arm in different places, with a sawing motion from the wrist upwards, to represent the cuts or burns on the arms of that nation.

73. *Left-handed* — The left hand clenched is held [280] up before the neck; the elbow is then brought in to the side, at the same time giving to the fore-arm a twist, so as to bring the closed palm opposite the breast.

74. *I do not understand* — The fingers and thumb of the right hand brought together near their tips, and then approached and receded to and from the ear two or three times, with a quick motion, made within the distance of two or three inches; finish with the sign, No. 65.

75. *I understand* — The same sign with the preceding, excepting the No. 65., which is omitted. The motion of the fingers is designed to represent the sound entering the ear.

76. *Love or affection* — The clenched hand pressed hard upon the breast.

77. *Me (I)* — The clenched hand struck gently, and with a quick motion, two or three times upon the breast. Or, the fingers brought together, are placed perpendicularly upon the breast.

78. *You* — Is expressed by simply pointing at the persons, and the same for other objects within view.

79. *Multitude* — First indicate a man, No. 6., or whatever object it may be, and then the sign of a great many, No. 25.

80. *Opposite* — A clenched hand held up on each side of the head, at the distance of a foot or more from it.

81. *Hill* — A clenched hand held up on the side of the head, at the distance of a foot or more from it.

82. *River* — The hand, in the form of a scoop or ladle, is carried to the mouth, as if conveying water, and then drawn along in a horizontal line, with the edge downward, about the height of the breast.

83. *Counting, or enumeration* — The fingers or thumbs expanded, count ten. In order to proceed with the enumeration by tens, the hands must be [281] clenched; and if again expanded, it counts twenty, and so on, the hands being clenched between every ten. In order to indicate the digits, clench the hands, and extend the little finger of the left hand for one; extend also the ring finger for two, and so on; the thumb for five. These must remain extended, whilst the thumb of the right is extended for six, &c. Any number within five, above any number of tens, is indicated by clenching the left hand and crossing the right over it, with the requisite number of fingers extended. For the number of sixteen, exhibit the sign of ten, and then extend four fingers, and the two thumbs in the order of enumeration; for seventeen, proceed by extending the fore finger of the right hand, and so on to twenty. In this manner any sum can be denoted, always holding the backs of the hands upward. When enumerating a small number, where a considerable exertion of the memory is requisite, the Indians extend the left hand with the palm upward; whilst, with the index of the right, the fingers are successively bent into the palm, beginning as before with the little finger; and the greater difficulty in recalling to mind the numbers or events, the more apparent resistance is offered to the inflection of the finger.

84. *A Chief* — The fore finger of the right hand extended, pass it perpendicularly downward; then turn it

upward, and raise it in a right line as high as the head.

85. *Bad* — Make the sign of *good* (No. 42.), and then that of *not* (No. 65.)

86. *Gun* — Hold out the left hand, as in the act of supporting the gun when directed horizontally, and with the right appear to cock it.

87. *Gunpowder* — Appear to take up a pinch of the powder, and to rub it between the finger and thumb; then turning the hand, spring the fingers from the thumb upward, so as to represent the exploding of the powder.

[282] 88. *Ball, or bullet* — Make the sign of the exploding of the powder; then grasp the fore finger of the hand with the remaining fingers and thumb, so that the tip of it will so extend beyond them as to represent the ball.

89. *Scissors* — With the fore and middle fingers, imitate the opening and shutting of the blades of the scissors.

90. *Looking-glass* — The palm of the hand held before the face, the fingers pointing upward.

91. *Writing* — The act of writing is imitated by the finger, in the palm of the opposite hand.

92. *Brother* — The sign for a man (No. 6.), succeeded by placing the ends of the fore and middle fingers of one hand together in the mouth.

93. *Sister* — The sign for a squaw (No. 16.); after which place the fingers in the mouth, as in No. 92.

94. *Cold* — The arms, with clenched hands, held up before the breast, thrown into a tremulous motion as if shivering with cold.

95. *Cowardice* — The head stooped down, and the arm thrown up to protect it; a quick motion.

96. *Marching, or travelling moderately* — The hand held vertically as high as the neck, with slightly divided fingers,

and rocked edgewise forward and backward upon the wrist, extending the arm a little forwards. This sign resembles that for *inquiry* (No. 27.), but differs in the direction of the motion of the hand.

97. *The return of a party through fear* — Begin with the preceding motion; then draw the tips of the fingers and thumb together, and retreat the hand to the body.

98. *Hunting shirt* — The fore finger and thumb, so opposed as to form a curve, are passed near the surface of the body, from the forehead to the abdomen.

99. *Surprise or astonishment* — Is indicated by placing the hand upon the mouth, to show that [283] language is inadequate to communicate their sensations.

100. *Calumet dance* — The hand extended with the edge upward, and with the arm waved sideways, with a motion like that of a swing.

101. *Beaver trap* — The two fore fingers brought suddenly together, in a parallel manner, so as to represent the snapping of the steel trap.

102. *Stone* — Close the right hand, and strike the palm of the left hand two or three times with it.

103. *Give it to me* — The hand extended in a pointing position towards the object in request; then brought towards the body with the finger raised vertically, and laid against the breast.

104. *Mountains* — When speaking of the Rocky Mountains, Tarrarecawaho held up the fingers of his left hand, a little diverging from each other; and to convey the idea of the streams flowing from them, he placed the index finger of his right hand alternately between each two of them, and drew it away in a serpentine manner.

The following signs are extracted from an essay by

William Dunbar, Esq., published in the sixth volume of the Transactions of the American Philosophical Society. It will be observed that some of them differ essentially from those which we obtained, and that we have omitted ten of them which correspond with those we have given.

White — With the under side of the fingers of the right hand rub gently upon that part of the left hand which corresponds with the knitting of the bones of the fore finger and thumb.

Egg — The right hand held up with the fingers and thumb extended, and approaching each other as if holding an egg within.

The same, or similar to what went before — Place the two fore fingers parallel to each other, and push them forward a little.

[284] *Snow* — Begin with the sign of rain, then the sign of air or cold, and conclude with the sign of white.

Ice — Begin with the sign of water, then of cold, then the earth; and, lastly, a stone, with the sign of sameness or similarity.

Hail — Begin with the sign of water, then the sign of cold, next the sign of a stone, then the same, then the sign of white; and, lastly, conclude, with the sign of an egg; all which, combined, give the idea of hail.

Frost — Begin with the sign of water, then the sign of night or darkness, then the sign of cold, then the sign of white; and, lastly, the earth.

Cloud — Begin with the sign of water; then raise the two hands as high as the forehead, and placing them with an inclination of 15°, let them gently cross one another.

Fire — The two hands brought near the breast, touching or approaching each other, and half shut; then moved outwards moderately quick, the fingers being extended,

and the hands a little separated at the same time, as if to imitate the appearance of flame.

Bring, fetch, or give me — The hand half shut, with the thumbs pressing against the fore finger, being first moderately extended either to the right or left, is brought with a moderate jerk to the opposite side, as if something was pulled along by the hand. Consequently, the sign of water preceding this, would convey the expression, "Give me water."

Earth — The two hands open and extended, brought horizontally near each other opposite to either knee, then carried to the opposite side, and raised in a curve movement, until brought round and opposite to the face.

Cold, or Air — The right hand held perpendicularly upwards, and brought forwards with a tremulous or vibratory motion, until it passes beyond the face.

Big, great, or large — The two hands open, placed [285] wide apart on each side of the body, and moved forwards.

Fear, to be afraid, to cause fear — The two hands, with the fingers turned inwards, opposite to the lower ribs; then brought upwards with a tremulous movement, as if to represent the common idea of the heart rising up to the throat: the three last signs, placed in the order given, would convey the idea of a violent hurricane.

Moon — The thumb and finger open are elevated towards the right ear; this last sign is generally preceded by the sign of the night, or darkness.

Heat — The two hands raised as high as the head, and bending forwards horizontally, with the points of the fingers curving a little downwards.

Clear — The hands are uplifted, and spread both ways from the head.

Thunder — The sign of rain, accompanied by the voice imitating the rumbling sound of thunder.

Lightning — First, the sign of thunder; then open or separate the hands; and, lastly, bring the right hand down towards the earth, in the centre of the opening just made.

Male and female — Note: to distinguish between the male and female, in all cases add for the male a fillip with the fore finger of the right hand on the cheek; and, for the female, bring the two hands open towards the breast, the fingers approaching, and then move them outwards.

Dunghill jowl — Bring the thumb and fingers of the right hand together; and holding the hand moderately elevated, move it across, imitating the motion of the head of a cock in walking.

Turkey — The open hands brought up opposite to the shoulders, and imitating slowly the motion of the wings of a bird; to which add the last sign.

[286] *Duck* — The last sign; then the sign of water; and, lastly, the sign of swimming; which last is performed by the fore finger of the right hand extended outwards, and moved to and fro.

Horse — The right hand, with the edge downwards, the fingers joined, the thumb recumbent, extended forwards.

Deer — The right hand extended upwards by the right ear, with a quick puff from the mouth.

Man — With the fore finger of the right hand extended, and the hand shut, describe a line, beginning at the pit of the stomach, and passing down the middle of the body as far as the hand conveniently reaches, holding the hand a moment between the lower extremities.

Woman — The finger and thumb of the right hand partly open, and placed as if laying hold of the breast.

Child — Bring the fingers and thumb of the right hand,

and place them against the lips; then draw them away, and bring the right hand against the fore of the left, as if holding an infant. Should the child be male, prefix the sign of a man before the last sign; and, if a female, do so by the sign of the woman.

Boy — Bring the fingers and thumb of the right hand to touch the lips; then extend the hands and make the sign of man; then raise the hand, with the fingers upwards, placed at the height of a boy.

Girl — Begin with the above sign, and make the sign of woman; and then raise the hand to the height of the girl.

You — The hand held upwards obliquely, and pointing forward.

He, or another — The fore fingers extended, and the hands shut, and fingers brought over one another, or nearly touching, and then separated moderately quick.

[287] *Many, or much* — The flat of the right hand patting on the back of the left hand; which is repeated in proportion to the greater or lesser quantity.

Know — The fore finger of the right hand held up nearly opposite to the nose, and brought with a half-turn to the right, and carried a little outwards. Place any of the articles before the last sign, which will then signify, "I know, you know, he knows;"—both hands being made use of in the manner described, implies, "to know much."

Now, or at present — The two hands forming each a hollow, and brought near each other, and put in a tremulous motion upwards and downwards.

Come here — The hand stretched outwards, with the palm under, and brought back with a curve motion downwards, and inclining to the body.

Go — The back of the hand stretched out and upwards.

What say you — The palm of the hand upwards, and carried circularly outwards and depressed.

No, nothing, I have none — The hand held up before the face, with the palm outward, and vibrated to and fro.

From whence come you? say — First, the sign of you; then the hand extended, open, and drawn to the breast; and, lastly, the sign of, "what say you?"

Come — The fore-finger moved from right to left, with an interrupted motion, as if imitating the alternate movement of stepping.

Mine — The hand shut, and held up to the view.

House — The hand half open, and the fore finger extended and separated; then raise the hand upwards, and give it a half turn, as if screwing something.

Done, or finished — The hands placed edge up and down, parallel to each other; the right hand without; which latter is drawn back, as if cutting something.

Spring season — The sign of cold, to which add the last sign of being done or finished.

Body — The hands with the fingers pointed to the lower part of the body, and then drawn upwards.

Hair — The movement of combing.

[289] APPENDIX C

INDIAN SPEECHES

Speeches of Pawnees, Pawnee Loups, and Pawnee Republicans, at a council held at the Engineer Cantonment, October, 1819.

IN concluding his address, on opening the Pawnee council, Major O'Fallon requested them, if any subject rested heavily on their minds, to come forward and express themselves without fear. Long Hair (Tarrarecawaho,) immediately arose, and with a firm step placed himself in the middle of the area. He stood for a short time immovable, then slowly advanced nearer to the agent, and with a very loud, powerful voice, fierce countenance, and vehement gesticulation, thus addressed him:

Father, The Master of Life placed me on this land, and what should I fear? Nothing. You are a chief, and I am a chief.

Father, Look at me, and see if I deceive you, when I say that I have but one intention, and that is a good one.

Father, My heart is strong; I say, my heart is strong.

Father, Those who robbed and whipped your people, I did not see; I was not present.

Father, Those Republican Pawnees are bad people, they have injured the whites, but I have not, and that is the reason why I am not afraid to see you.

[290] Father, We are fond of pipes; we like to travel to our neighbouring nations, and smoke with them.

Father, I am desirous to go now, and hunt the buffaloe;

but when the grass comes up in the spring, I hope to see you again.

Father, This medal which you see on my neck, is my father's image. It is dear to me, because he presented and placed it on my neck.

Father, Wherever I have been to visit my father (Governor Clarke), or my fathers, I have heard good talk, and mine has been good also; but there are many here who will not give ear to their words.

Father, I am happy to hear what you say about peace; that we particularly desire, especially with the whites.

Father, Affairs have been bad. I am not a child; I listened to the talk you sent to us, and was therefore not afraid to come and see you. Those whites, and all those people around me, I consider as my children, and am glad to see them.

I tell you that I am poor; who is the cause of it? not myself; it is my young men. That is all I have to say. I give you my hand.

La-ceed-ne-sha-ru, the Knife Chief, a Pawnee Loup.

Father, Here I am before you. You see me. I am poor.

Father, I am a Pawnee wolf, and those you see there (pointing to his band) are Pawnee wolves.

Father, Look at my people, and see if they have any thing belonging to a white man.

Father, I tell you the truth, I am poor.

Father, Amongst my people, I believe, there is not an individual that has injured you. If any one of the other bands can say they have, let them speak.

Father, This medal which hangs upon my breast, I received from my red-headed father below (Governor [291]

Clarke). I listened to his words, and on my return I told them to my people, and they believed.

Father, You see that I am old; but I do not recollect that myself, or any of my people, ever injured any of the whites.

Father, Neither my hands, nor those of my young men, have ever been stained with the blood of the Americans.

Father, That is the reason why I have come to listen again in the words of my father.

Father, That is all I have to say. I have finished.

Major O'Fallon

Grand Pawnees, and Pawnee Republicans; I am not satisfied with what you have said. What you have said is good, but it is not enough. Until you drive those dogs from among you, I will not consider you in any other light than as dogs.

Pa-ne-ca-he-ga, Fool Robe's son, a Pawnee Republican.

Father, I am a Pawnee Republican.

Father, What you have said is true: the Pawnee Republicans are dogs, they do not listen with their ears.

Father, I have never done ill to a white man myself; I have never even taken a knife from him; and my heart is distressed because my young people will not listen.

Father, It is true what Tar-ra-re-ca-wa-ho has said, that we whipped two white men; we did do it.

Father, I am poor; I say, I am poor.

Father, It is true that it is customary for my people to rob white men, when they go to war, but I never knew them to kill one.

Father, My heart is distressed because my young men will not listen; they have no ears.

[292] Father, The offenders have not ears; they were afraid to come and see you, knowing they had done wrong.

Father, I came without fear, on a good horse, which I present to you. My people were afraid that I should come.

Father, I am without fear. I said, when I set out from my village, why should I fear, if my father strikes me, it is no more than a father does to his child.

Father, We are glad to hear your words; we will make peace; we will return to our village, and see what those dogs will do.

Father, That is all I have to say. I have done.

Chief of the Tappage band of the Grand Pawnees.

Father, I have come to see you; here I am, very poor.

Father, I have seen my father below, and this is my great father I wear round my neck.

Father, When he put this about my neck I heard what he said to me, and have recollected it.

Father, Our young people will not attend to what we say; we talk and repeat to them, but when they lie down, they forget all before midnight.

Father, You ought to have heard whether my band have injured you or not.

Father, There was a time when our hands were red with the blood of your people, but since we have been below, it has been washed off.

Father, We visited our father below; he told us, when we met a white man to treat him well, and let him never fear.

Father, I see you are looking on me; I am poor; I have nothing on me of the make of the whites; I have even turned my buffaloe robe to hide its tarnish.

Father, I came here to listen to your words, to hear what you have told us.

[293] Father, You say there is a God above; I know it; when he is angry I hear him speak (alluding to the thunder).

Father, I consider you equal to him. You are the same to me.

Father, All you see here are your children; they are poor.

Father, That is all I have to say.

Major O'Fallon

Pawnee chiefs and soldiers; I called you here to adjust the difference that is between us. I called you here to bring the articles which were stolen from my people. I have not yet seen them. I called you here to bring the dogs that stole them; but I have not seen them; I hope that you have brought them.

My eyes have been looking for them, and my ears have been listening, but I am not satisfied.

(The following articles were now given up.

One buffaloe robe, one horse, one pair double-barrelled pistols, one bird-bag, one tomahawk, one axe, one powder-flask, one shot-bag.

Fool Robe's son said, there are many articles lost, which my people took from you, and two of the horses gave out on the road, a few miles from this place.¹⁸⁷)

Long Hair

Those who did the mischief did not come. They were afraid. Here are two of their chiefs.

¹⁸⁷ One of the horses has been since found.—JAMES.

Major O'Fallon

Pawnee chiefs and warriors; I wish to know whether or not you are able to punish the offenders; [294] whether or not there are good people enough amongst you to punish them. Our soldiers are anxious to march against you, but the chiefs restrain them, lest they injure the innocent. That is the reason why I wish to know if you are not able to punish the bad. Our people do not wish to spill innocent blood. Therefore I desire to place their punishment in your own hands.

I have come to this land, not to spill blood, but to prevent its flowing. I have come to give you rest, and peace, and happiness, not to make war. If your arms are not strong enough, come forward and say so; if you are not chiefs, say so.

Pawnees, If I were to see our troops marching towards your nation, tears would fall from my eyes; because I believe that there are some good men among you, whose blood would immediately flow. Red Skins have called us cowards when we have hesitated to spill blood, when it ought to have been spilt. Even some of your chiefs have insulted our people, thinking they would not resent it. I tell you, Pawnees, that we are tired of submitting to insults. My nation is most powerful, and that is the reason why the Great Spirit restrains our arm.

Come forward, you chiefs, and let me know what is the strength of your arm; my ears are anxious to hear; say, before it is too late, whether you can govern your people or not.

Pe-ta-le-sha-roo, Republican chief.

Father, I am not afraid of these people, these Pawnees you see here. They have never struck me with a whip;

(meaning, that when he has chastised his people they have not retaliated upon him.)

Father, I have travelled through all the nations below; they have not injured me.

Father, I have seen people travel in blood. I have [295] travelled in blood myself, but it was the blood of Red Skins, no others.

Father, I have been in all the nations round about, and I have never feared a Red Skin.

Father, I have seen the time when blood flowed upon the ground. It drew tears from many eyes. But I went down to visit my father, (Governor Clarke,) and returned contented.

Father, I have no longer a desire for war. I delight to sit in peace.

Father, When I went to see my father below, although there was danger in the way, I was not afraid to go alone.

Father, But I am now like a squaw, and instead of carrying the mark of a man, I have that of a woman.

Father, My right arm, and that half of my body is white man, and the other only Indian.

Father, When I returned from below, I related to my people what I had seen, but none of them had ears; they would not hear me.

Father, I have often traded with the whites. I always traded fairly, while the Pawnee Loups did not. Here is a trader who knows me (Mr. Pappan).

Father, We will punish the offenders. It is very easy; it is not difficult at all.

Father, I will score the back of him who cut your tent.

Father, It is some time since I have worn this on my neck; I have kept it secreted, because they will not respect it.

Father, After our battles with the people around us, I have gone alone, crying into their villages, and have received no harm. (In other words, Indians have forgiven me for spilling their blood, then why should not the magnanimity of the whites forgive the comparative trifling injuries I have done them.)

Father, When the war-party that robbed your [296] people returned, I was not told of this act. If I had known it, and had demanded the articles, perhaps they would have been given up to me; but they are now so widely distributed that it is impossible to collect them all.

Father, I have never yet whipped my people, but I intend to begin now. I will punish the offenders as soon as I return home.

Father, I am glad to see you writing down all that has been said. When a man dies, his actions are forgotten, but when they are written down, it is not so.

Father, Some among us have had difficulty with the traders, because they would give but very little vermilion, &c. for our furs.

Father, When I have seen a person poor, and I had a horse to spare, or a blanket, I have given it to him.

Father, From this day I undergo a change; I am now an American, and you shall hear that it is true.

Father, If you hear of my being whipped when I return to my village, consider yourself the cause of it, for I will whip those dogs that insulted you as you desire me.

Father, You love your children; I love mine.

Father, Be quick, do what you have to do. If you intend to punish us, let us know it.

(This is an artful, politic Indian. If he is sincere in what he has here said, his change has been a sudden one. When Mr. Dougherty delivered the talk sent by Major

O'Fallon to this people, in their village, demanding the stolen articles, &c. this man ridiculed him, saying, that for his part he had nothing but an old pair of shoes that the Red Head had given him, and which he would return.)

[297] *Major O'Fallon*

Do you wish to see our warriors among you, to punish these people. I do not wish to see them among you. You, chief of the Pawnee Republicans, (addressing the last speaker,) you say you are able to punish them; I am in hopes that you have not lied; if you have, we must do it ourselves. If my eyes cannot see you punish them, my ears must tell me you have done it.— Yes! my ears must tell me it has been well done, that you have given two stripes for every one that those two unfortunate traders have suffered. And you, Long Hair, that have so strong an arm, assist him, lest our warriors should be obliged to visit you, when yourself might not be distinguished from the others. I do not yet know you as chiefs, but I wish to know you as such; I want to have some proofs that you are chiefs. When I learn that you have punished those who have done wrong, as our chiefs punish, then I will recognize you. You tell me that your stomachs are empty: I will give you something to fill them. You show me your naked skin; my heart will not let me clothe it until this difference is settled. Were I to smoke with you on this day, the smoke would not rise; it would fall to the ground. When I shall be able to cover what is past, and to forget it; when I smile upon you in shaking hands, then perhaps I may give you something to eat and to smoke. I come not to beg your friendship; I come not to ask your land or your skins; I ask nothing of you. Pawnees! I wish to be at peace with you, and all the Red Skins, I tell you again. I

know that the Great Spirit has done little for you; he has done much for us. I come to do something for you, when I see you willing to do something for yourselves. I come to give you advice to enable you to live happily, to calm your troubled minds, and to give peace to your troubled heads.

[298] If in reality you punish those who have offended, and my ears tell me so, I will take you by the hand and smoke with you; but if your ears are unwilling to hear my words, close your ears and do not hear them.

I will work a change among you, Red Skins, and when my arm fails, my bones shall whiten on your plains, for my nation to come and bury.

Pawnee Loups, Before you leave this place I will give you something to make your hearts glad.

Long Hair, If you would make me believe that you are disposed to behave well, treat those good people (the Pawnee Loups) that reside with you kindly. Your arm is stronger than theirs; do not raise it against them, unless they insult you. I hope the day is not far distant, when I shall be able to smile on your people, as I now smile on them.

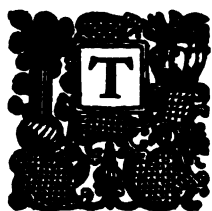
Pawnees, When you find yourselves unable to punish those dogs among you, think that you hear the sound of those bugles from the hills near your village.

(Presents were now made to the Pawnee Loups; but to the others only a little tobacco was given, and no chiefs were recognized.)



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